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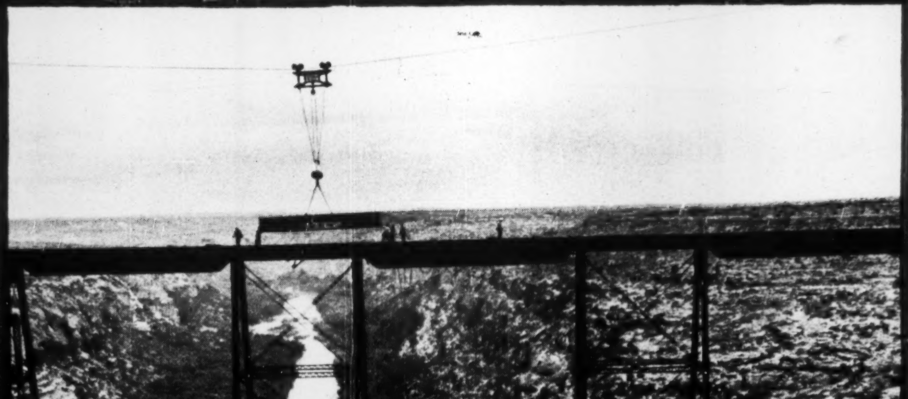
JUNE 30, 1949



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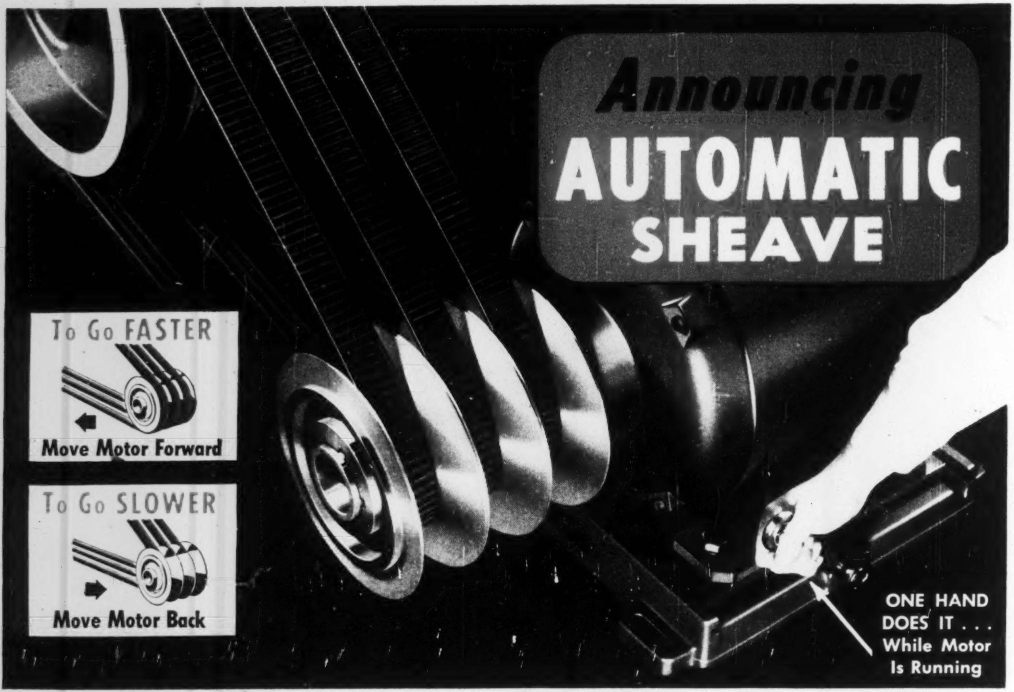

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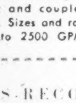

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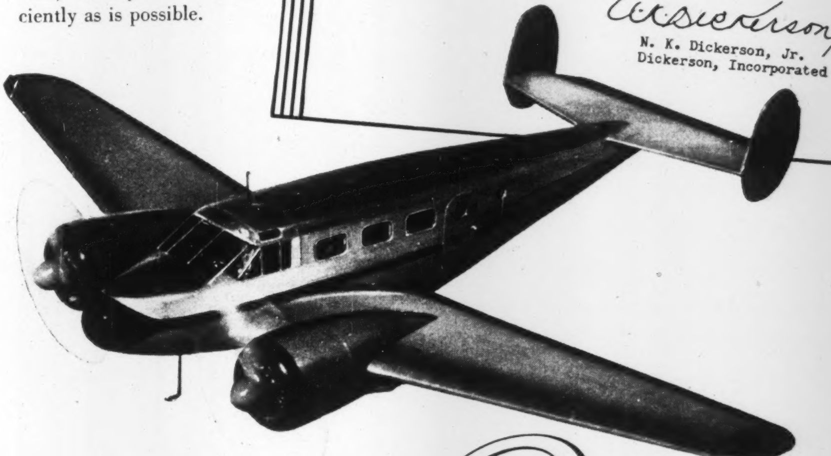

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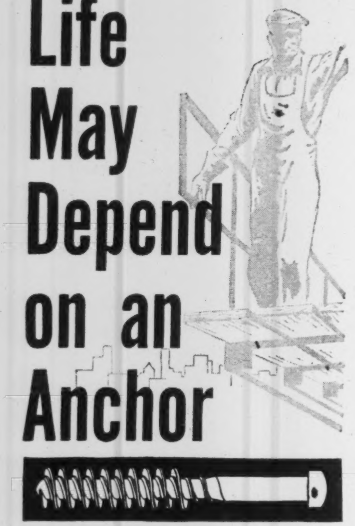

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ENGINEERING NEWS-RECORD

VOLUME 142 JUNE 30, 1949 NO. 26

WALDO G. BOWMAN
Editor

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THE COVER PICTURE

Using a 1,515-ft. long cable strung above the bridge, workers have started to dismantle the Southern Pacific Railroad's old Pecos Gorge crossing. A new high-level structure has been built to take its place after over 50 years of service. The overhead cable will handle all parts weighing up to 25,000 lb.; heavier members will have to be cut in dismantling. See p. 18 of this issue for a description of the historic bridge.

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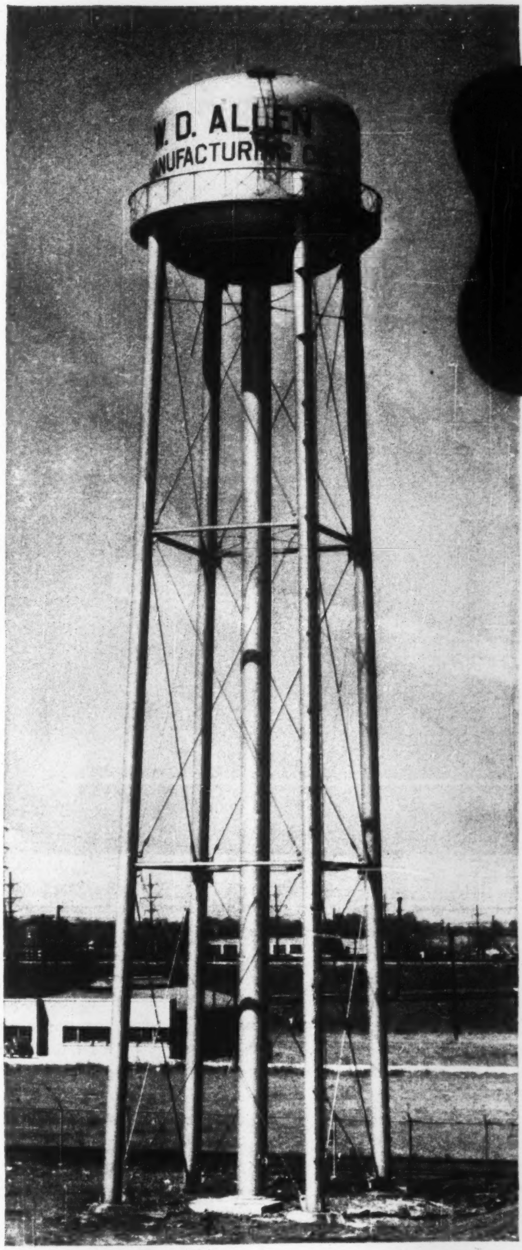

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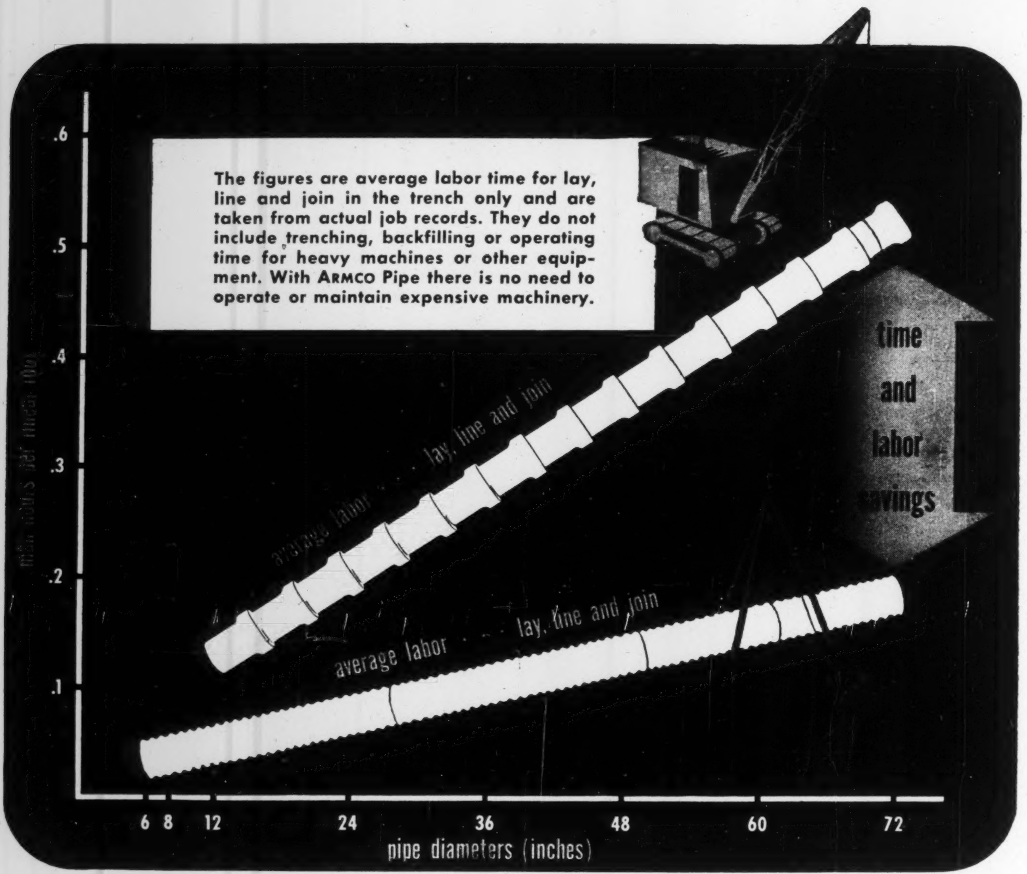

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THE CONSTRUCTION WEEK

OFF THE BOARDS—The Hoover Commission's blueprint for bringing order out of the sprawling bureaucracy is coming off the drawing boards rapidly—and President Truman and Congress seem together on the project—so far. The seven programs sent up to Congress last week (ENR June 23, p. 33) are strongly bi-partisan in flavor and offer little material for serious quarreling. Noting that the President sent up "the easy ones" first, observers figure that Congress will approve and remain in session long enough to put them in effect. But, though Mr. Truman has shown himself prepared to hew to the Hoover line quite closely, controversial matters are still to come: Merging of construction agencies principal among them. One caution: Don't look for immediate economies; it will take months to realize increased efficiencies.

BOLT FACTS—A progress report covering seven research projects on riveted and bolted steel connections will be released shortly by the Research Council on Riveted and Bolted Structural Joints. Some of the projects—started with the council's organization in January, 1947—have already been advanced to a stage where definite conclusions may be drawn. For example, reversal of load is reported to have little effect on joints held by the clamping pressure of high-strength bolts, and field tests on railroad bridges (as well as laboratory investigations) indicate that the bolts stay tight without locking devices.

INTER-AMERICAN HIGHWAY—Before he relinquished his post as head of the Federal Works Agency to take over the Maritime Commission, Gen. Fleming left a memorandum covering suggested legislation for completion of the Inter-American Highway with Speaker Sam Rayburn of the House. His suggestion proposed $8,000,000 a year for eight years to finish the job.

NO ESCALATOR, NO DE-ESCALATOR—South Dakota contractors and state building officials are holding meetings to settle contractors' complaints about a "de-escalator" clause in new state contracts. The clause provides that bid prices must be reduced if building commodities drop 10 percent or more. Contractors pointed out that the state allowed no "escalator" clause when prices were rising, objected strenuously to any cut.

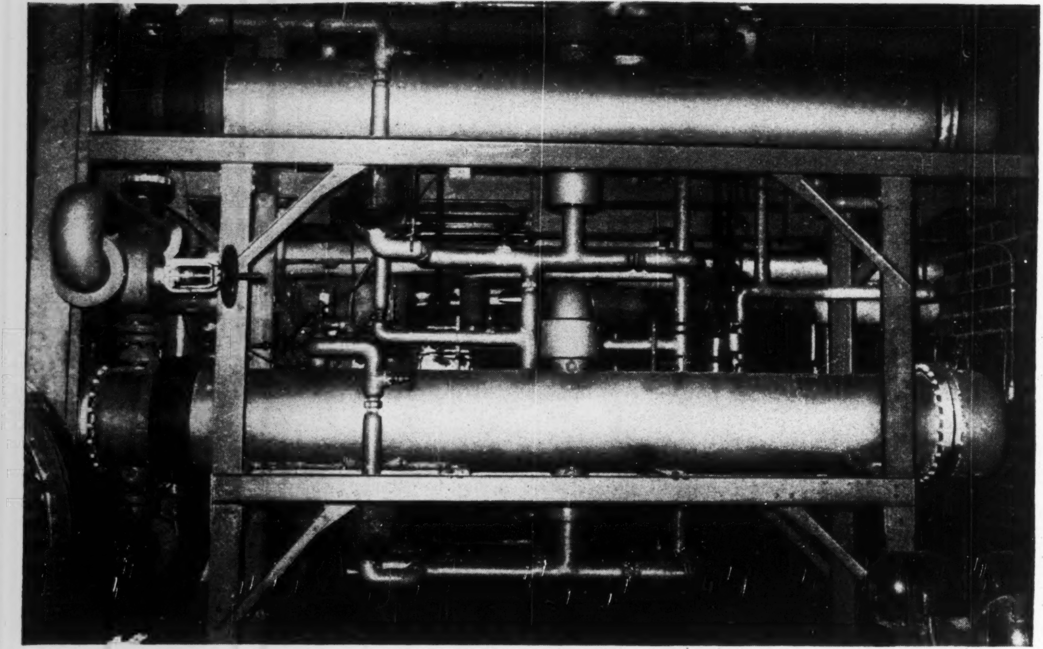
EASY OUT—Bridge Canyon Dam on the Colorado River will get a go-ahead from Congress this session—but the central Arizona irrigation project won't. Such a decision is the easy out for Congress—both states are agreed, at least, that they want power.

EASE UTILITY DISTRICT CONTROLS—California, under terms of a law signed by Gov. Earl Warren, has eased restrictions governing public utilities that wish to enter joint contracts with the federal government for waterworks construction. The new law eases present restrictions that now limit contracts with the government to 30 years; and removes the present limitation of 20 percent of assessed valuation on the bonded indebtedness a district may incur.

JUMP ON DEMOCRATS?—Current Republican action to get the jump on Democrats in meeting a depression—should one occur—is Senator Brewster's bill for a $50,000,000 federal appropriation to draw blueprints for public works projects. The Maine senator says that the present "shelf" of $2 billion worth of federal construction isn't enough—much of it is obsolete.

HOME PRICE DOWNGRADE SLOW—Architects and builders were agreed (in separate statements) last week that any downtrend in home prices will be slow. Said R. M. Lockwood, president of the National Association of Home Builders: "Freight rates, taxes, labor demands are important factors in keeping home prices up." Said Henry T. Heald, president of the Illinois Institute of Technology, speaking before Chicago architects: "One important factor contributing to high cost of construction is . . . outdated building codes."

FIGHT ON BASING POINTS—Senator Joseph O'Mahoney's basing point bill (ENR June 16, p. 9) has touched off a general fight in the field of federal policing of business price policies. Result: There may be no basing point law this year. Nine words in parentheses, inserted into the bill by Senator Kefauver, are the nub of the argument between anti-monopolists and those who insist on mothering the little fellow. The words are "other than a discrimination which will substantially lessen competition." These words in effect retain the ban on price discrimination set up by the Robinson-Patman Act to help the small-lot buyer. But Rep. Francis Walter managed to get the House Judiciary Committee to report out the bill, minus Kefauver's words. That was enough to set Sen. Wright Patman against the whole measure, as a menace to the little business man.



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EDITORIALS

A Return to Sanity

It is refreshing to have a federal circuit court of appeals uphold a district court finding that workmen engaged in construction at Oak Ridge, Tenn., were not "engaged in interstate commerce" after so many findings to the contrary by lesser courts and the National Labor Relations Board during the past few years. Under the influence of those who thought that wisdom and justice flowed only from Washington the so-called commerce clause of the Constitution had been stretched to include almost every kind of work. Even elevator operators were found to be engaged in work "affecting interstate commerce," and so subject to federal rather than local labor laws. In the case heard by the circuit court, $1,000,000 in overtime pay hung on the court's findings.

The matter would not be serious if a contractor knew definitely when he took a job what labor law he would be working under, because he then could make his bid accordingly. But for a decade or more contractors have been placed in the position of never knowing for sure whether they were working under local or federal laws, and if they guessed wrong, the cost might be high. The circuit court decision in the suit brought against the J. A. Jones Construction Company should go far toward correcting this situation.

Engineers and "Point Four"

Engineers in increasing numbers are forming the advance scouts of President Truman's "Point Four" program—the lending of American know-how to foreign countries to help them raise their standards of living and so expand the market for American products. This conclusion stands out from reading the "Developments Abroad" section of the June 16 issue of ENR. John L. Savage and Paul van der Lippe in Ceylon, along with the Morrison-Knudsen Co. staff, David R. May in Rhodesia and F. H. Kellog in India, are examples of how far afield the engineers are going.

There could be more of this type of activity if engineers with wide experience were to tie up with large contracting organizations to form teams that can take on top direction of both engineering and construction on big foreign jobs. At the present time the government of Ceylon is seeking proposals from just such combinations on a big multiple-purpose water project. Other opportunities appear to be open to engineers who can find funds to finance water services and electric utilities in countries where there is reasonable assurance that foreign investments in such utilities will be protected against confiscation.

To facilitate the latter type of investment, the National Foreign Trade Council, New York, in a pamphlet entitled "Private Enterprise and the Point IV Program," recommended the negotiation of bilateral treaties to assure the necessary protections. The council believes that, given the proper environment, the funds for economically sound projects in foreign countries will be supplied through private sources. The council also proposed that technical missions should be sent to interested countries, but it emphasized that these missions should not be permitted to supplant the functions of competent private engineering firms or industrial consultants. Here is the key to Point IV: Help private business to implement it. Don't make it a government project.

Part of the Economic System

Much is being said in educational circles these days about making young engineering students conscious of the social and economic aspects of the things that engineers do. The basic idea behind this thinking is sound. The sooner a young engineer realizes that he is not working in a vacuum, the sooner he will begin to develop into a more useful unit of society. But too frequently the engineering educator disposes of the whole problem conveniently by turning his engineering students over to the liberal-arts faculty for one of its "cultural" courses.

The error and ineffectiveness of this approach to the problem was the subject of some pertinent comment by H. P. Hammond, dean of the school of engineering at Penn State College, at the recent ASME annual educational conference. The development among engineering students of knowledge and appreciation of the part that engineers play in modern society, Dean Hammond said, cannot be left entirely to the teachers of non-technical subjects, primarily because many of them are not conscious of the important part played by engineers, or are not interested. "The engineering teachers themselves have a definite responsibility in this connection, and there is a great opportunity for them to discharge the responsibility." Dean Hammond then went on to cite examples of how the engineering teacher, by giving some thought to the matter, can weave into his regular teaching program examples of how a past event or the work of some earlier practitioner in the field under study profoundly affected human progress.

Teacher as well as pupil should benefit from such a plan. If each morning a teacher were to read the news of what happened the day before at the United Nations headquarters or in Washington with the need in mind for finding examples to be used in his classes, he soon would discover a wealth of material significant to him and student alike.

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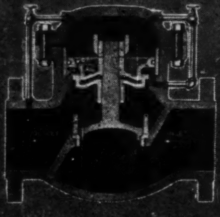

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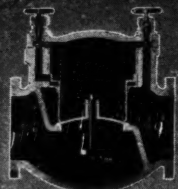

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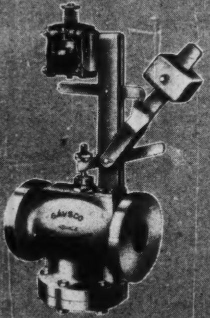

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ENGINEERING NEWS-RECORD

June 30, 1949 VOL. 142 NO. 26

Point Four proposal passage seen doubtful this session

Plan asks $45 million to enable U. S. to work through UN directly with other lands in developing backward areas—Sanitarians and mappers will be first needed

Vincent B. Smith

President Truman's modest proposal for initiating his Point Four program has only mediocre chances of getting passed in this session of Congress. Before sending it to the Hill late last week, the President and his advisers had trimmed the program to minimum dimensions in an effort to win congressional favor — without crippling the global impact envisioned in the Jan. 20 inaugural address.

As submitted, the plan calls for (1) a first-year appropriation of $45,000,000 to supply technical assistance to the under-developed regions of the world, and (2) authority for the Export-Import Bank to guarantee U. S. private investments against risks peculiar to those regions.

The President stated his broad purposes in the first sentence of his message: "To enable the United States, in cooperation with other countries, to assist the peoples of economically under-developed areas to raise their standards of living, I recommend the enactment of legislation to authorize an expanded program of technical assistance for such areas, and an experimental program for encouraging the outflow of private investment beneficial to their economic development."

UN's role

Cooperation with other countries would be carried out in part through the United Nations. A share of the requested appropriation—probably a third—would go to help the UN and its specialized agencies furnish technical aid to underdeveloped areas. The President reminded Congress that the UN had recently made a survey—at the request of this government—of what its agencies could do in this field and had estimated the cost at $35,000,000 for the first year. Costs beyond the amount coming from the U. S. would be covered by the UN.

"Much of the technical assistance required," the President went on to say, "can be provided directly by the United States to countries which are in need of it."

Direct U. S. aid under the plan, he said, calls for expansion and integration of this country's present activities in giving technical help to other parts of the world.

The President's brief outline—representing the consensus of Administration thinking — reinforces previous opinion as to the branches of U. S. engineering that will get the first call in the program—when enacted. In the front rank will be the sanitarians, water supply and sewerage engineers, and agricultural technicians. With them or ahead of them you will find the surveyors, cartographers and topographers—making maps with the aid of both aerial and ground surveys. At the same time, geologists and prospectors will be exploring the region's underground resources.

Not far behind these groups will come the transportation wave—first the engineers to determine and design the most economical and feasible transport systems—land, water or air —followed by their brothers to supervise construction. Along with transportation development normally would come the first large-scale attack on major projects for land reclamation, power, river development, irrigation and industry.

The Point Four message reached Congress at a time that is not exactly propitious. Declining tax revenues and the slump in business cause congressmen to look at all spending proposals with a cold eye. The effect was apparent earlier in the week when the Senate Foreign Relations Committee refused a $10,000,000 request for the Institute of Inter-American Affairs—a forerunner of Point Four—and recommended $5,000,000. The President's $45,000,000 request includes $10,000,000 for the institute for fiscal 1950.

TVA cost distribution method gets OK

The Tennessee Valley Authority's methods of cost allocations for multiple-purpose projects last week got a clean bill of health from the Federal Power Commission. In a report to the Senate Committee on Public Works, FPC said that TVA's cost distribution—among navigation, flood control and power—on its 16 multipurpose reservoir developments is reasonable and acceptable within the meaning of the Tennessee Valley Authority Act.

Conclusions offered in the report: "A. The alternative single-purpose projects (hypothetical projects used by TVA in arriving at cost allocations) are justifiable on a cost-benefit ratio basis; B. The principles and methods employed by TVA in allocating the joint costs of its multiple-purpose projects are reasonably adapted for the purpose; C. The allocation of the actual joint costs of the multiple-purpose projects to navigation, flood control, and power made by TVA in its report dated November 13, 1945, is reasonable and should be accepted for the purposes of the Tennessee Valley Authority Act."

TVA uses an allocation method known as the "alternative justifiable expenditure theory." Under this theory costs are estimated for alternative hypothetical single-purpose systems capable of achieving the same navigation results, the same flood control results, and the same power results as are obtained from TVA's actual multiple-purpose projects.

If it is found that the single-purpose systems would have been economically feasible the direct costs incurred in constructing the actual multiple-purpose projects are then deducted from the estimated costs of the single-purpose systems to obtain the "remaining alternative costs." The "remaining alternative costs" provide a ratio basis for allocating the joint costs to the purposes served by the system.

On this basis TVA found that the joint costs should be allocated approximately 30 percent to navigation, 30 percent to flood control, and 40 percent to power.

NEWS BRIEFS

Scenic Road—A 180-mile, water-level highway, with trucks banned, along the route of the old Chesapeake & Ohio Canal, will link WASHINGTON, D. C., and CUMBERLAND, MD., if the national parkway proposed by federal officials becomes a reality. The preliminary survey and a National Park Service study resulted from a bill introduced to Congress by Representative J. Flenn Beal (R., Md.)

Shreveport Medical Center—J. A. Jones Construction Co. was apparent low bidder at $6,029,000 on the base proposal for construction of the Confederate Memorial medical center at SHREVEPORT, LA.

Toledo Expressways—Under proposals released by the City-County Plan Commission at TOLEDO, OHIO, that city's highway network of the future will have as its backbone two block-wide expressways cutting an X-shaped channel through Lucas County and capable of carrying 1,500 cars per lane per hour. This is the first master plan revision in Toledo in 25 years. It outlines for the whole Toledo area a vast system of superhighways, modified expressways and major streets.

Housing Plans—The Connecticut legislature has passed a housing bill which will provide 3,000 single houses to sell on low monthly payment plans to veterans and low-income families, and a total of 6,500 housing units to rent for $38-40 monthly. The housing bill provides for a $95,000,000 overall bonding program which includes $45,000,000 for rental units already authorized.

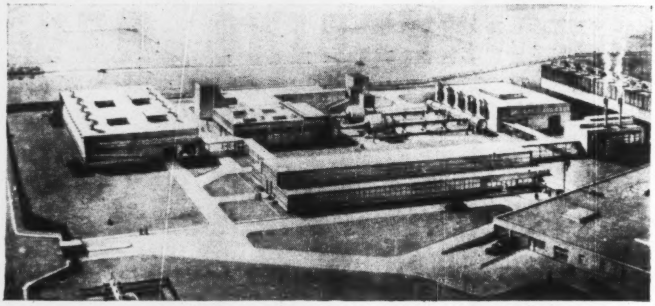
Alaskan Metallurgy—An Alcoa engineering party will arrive soon in SKAGWAY, ALASKA, to continue investigation work dealing with proposed establishment of a $300 million metallurgical industry in that area. Warren J. Mead, head of M.I.T.'s geology department, is in charge of the party. Alcoa plans are reported to call for development of low-cost power by diverting headwaters of the Yukon River to the Skagway area through a tunnel piercing the coast range.

Pipelines—Mid Valley Pipeline Co. has been formed to construct and operate a 1,000-mile crude oil pipeline from near Longview, Tex., to Lima, Ohio, at a cost of approximately $56,000,000. Line will be mostly 22 in. in diameter. Completion of the undertaking is scheduled for early 1951.

Work has been started by Oman Construction Co., Nashville, Tenn., on construction of the multi-million-dollar, 172-mile natural gas pipeline to OAK RIDGE, TENN. The 22-inch line will be built from Green Brier, Tenn.

New Research Center—Governor Alfred E. Driscoll of New Jersey recently dedicated the new Johns-Manville Research Center at MANVILLE, N. J., (ENR Aug. 8, 1946, vol. p. 169). There are four buildings on a 93-acre tract on the Raritan River about 40 miles from New York. This research center embodies a completely new concept of industrial laboratory design and construction, including laboratories with relocatable walls and built in services.

Island Shopping Center—Construction of a $1,000,000 shopping center in NEW BEDFORD, MASS., will begin soon. The site of the project will be Pope's Island in the Acushnet River, between New Bedford and Fairhaven.



Work to start on Navy's jet engine testing lab

Bids are being received on the U. S. Navy's $22,750,000 jet engine testing laboratory at Mercer Field, Trenton, N. J. One of the largest single construction projects ever undertaken in the area, it will require about two and a half years to finish.

The first phase of the work will be a $2,300,000 pumping plant to bring water to the laboratory from the Delaware River.

Commander Earl J. Scheve, officer in charge of construction at Mercer Field, says that the power of jet engines of latest design is so much greater than that of the usual types of airplane engines that no equipment at the Navy's aeronautical engine laboratory at the Philadelphia Navy Yard is capable of testing it, and there is no room for larger facilities there. Hence Mercer Field is the logical place for the new lab.

Large blowers will provide the equivalent of speeds up to 700 mph. and atmospheric equipment can simulate altitudes of 65,000 ft. Temperatures down to 67 degrees below zero can be applied to the operating engines.

In the architect's sketch of the laboratory reproduced above can be seen two large exhaust coolers in the center of the group of buildings. At the right, is the high pressure blower wing, next is the wing for three types of testing facilities and at the left are the exhaust blower wing and cooling tower block. The long building, foreground, is a machine shop and to the right of that is the power house. The building, partially shown at the lower right, is a present structure at the field.

To drill three tunnels for Los Angeles water

Tunnel drilling on the Los Angeles Department of Water and Power hydroelectric project in the Owens River Gorge is scheduled to get under way immediately following signing of an $8,947,520 contract awarded May 19 to a group of contractors composed of Guy F. Atkinson Co., Bressi & Bevanda Constructors, Inc., and David A. Gordon and A. Teichert & Son, Inc.

Three tunnels will be drilled, with a combined length of approximately 12 miles, according to Charles P. Garman, chief electrical engineer. Tunnel diameter will be 10 ft. The schedule calls for completion of Tunnel No. 2, 10,400 ft. long, by Oct. 1, 1950; Tunnel No. 3, 16,400 ft., by Nov. 1, 1950; Tunnel No. 1, 37,200 ft., by May 1, 1951.

The tunnels are phases of a construction program which will develop an additional 150,000 hp. for Los Angeles some time in 1951. Ultimate cost of the project is estimated at near $42,000,000.

City financing slows Ohio R. cleanup

Public pressure, industry-cooperation and municipal planning show promise of speeding the stream clean-up in the Ohio River Valley—despite financial difficulties of many municipalities plus the lack of adequate federal funds for implementing some of the work. These were the impressions gained from discussions of stream pollution abatement by a three-man panel—representing federal, state and regional agencies—during one of the technical sessions at the 23rd Annual Ohio Sewage and Industrial Wastes Treatment Conference held in Cleveland, Ohio, June 22-24.

Biggest single factor in launching the clean-up program for Ohio streams is the new amendment to Ohio's public health law (ENR April 14, p. 50, June 9, p. 50) which will become effective Aug. 25.

"For the first time in its history," declared F. H. Waring, chief engineer, Ohio Department of Health, "Ohio can compel industries and municipalities to cease polluting a stream before that stream is ruined from a health standpoint."

The new act supplements and puts "teeth" in Ohio's old public health law, adopted in 1908. There were no provisions in the old law compelling the treatment of industrial wastes before discharge into streams.

Cities progress slowly

E. J. Cleary, executive director and chief engineer, Ohio River Valley Water Sanitation Commission, expressed concern over the slow progress by municipalities in providing adequate treatment of sewage before discharge into streams.

Mr. Cleary stated that of the 44 industries in the Ohio Valley warned by the commission to cease stream pollution, 33 have either installed or are constructing treatment facilities for industrial wastes. On the other hand, only 4 of the 48 municipalities under similar compulsion have taken any action.

M. LeBosquet, Jr., Director, surveys and investigations, Public Health Service, Cincinnati, reported to the 224 sewage works men attending the three-day conference, on progress of the 1948 Water Pollution Control Act. The report was timely since it was given just one week short of the first anniversary of the President's signing the act into law (ENR July 1, 1948, p. 1).

Robert Bowman, chief operator of the Findlay (Ohio) sewage treatment plant, was elected chairman of the conference for the coming year, succeeding E. F. Wittmer, sanitary engineer, Ohio Welfare Dept. The new first and second vice-chairmen are Hubert Kline of Dayton, and W. E. Gerdel, Cleveland. G. A. Hall, assistant engineer, Ohio Department of Health, was reelected secretary-treasurer of the conference.

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Talks cover wide range in sanitary research

A symposium on recent research in the field of water, sewage and industrial wastes was held in Washington, D. C., last week under sponsorship of the U. S. Public Health Service. The two-day meeting was addressed by no less than 36 speakers, who averaged only 15 minutes each in their remarks but completely covered the field of sanitation study.

Discussion sessions followed scheduled talks at the close of each day's program.

Radio-active wastes were likened to other noxious chemical and industrial wastes in a discussion by Forrest Western of the Oak Ridge National Laboratory.

Disposal problems probably will be similar for both, he said, after complete knowledge has been gained on behavior of radioisotopes from the time they are released—both before and after entering human bodies.

Further discussion covered acid mine wastes, cyanide disposal, winery wastes, grease in sewage, studies in B.O.D. and reports on trickling filter investigations. Sewage analyses of many types were reported, plus a talk on results found in chlorinating raw and digested sewage sludge for disposal right along with the plant effluent.

Raw sludge was found more easily sterilized than digested sludge, but it was concluded that only by plant scale application could it be found whether the process was economical.

V. M. Ehlers of the Texas State Department of Health called the initial session to order, he is chairman of USPHS's sanitation study section, division of research grants and fellowships. Sessions that followed were presided over by Harold B. Gotaas, University of California; Rolf Eliassen, Massachusetts Institute of Technology; and C. C. Ruchhoft, USPHS Environmental Health Center, Cincinnati, Ohio.

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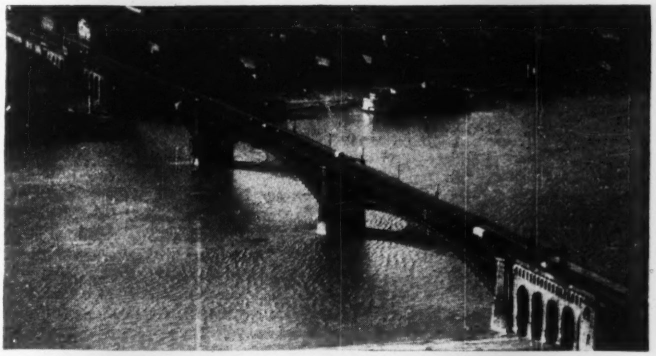
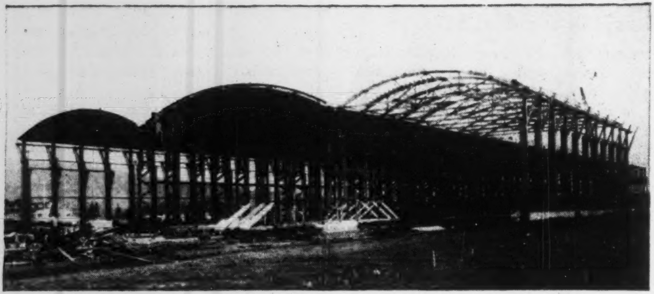
Reinforcing steel group initiates annual award

The Concrete Reinforcing Steel Institute will mark its twenty-fifth anniversary meeting next month with initiation of an award to be given annually for noteworthy contribution to concrete construction. The first award will be made during the July 14-16 meeting at White Sulphur Springs, W. Va.

Those advancements considered by the award committee must be noteworthy contributions to the theory of reinforced concrete design, research contributing to the advancement of reinforced concrete, or improvements in reinforced concrete construction practice.



75 YEARS OLD. Eads Bridge across the Mississippi at St. Louis, Mo., was opened ceremoniously as the first great crossing over the river July 2-4, 1874. The 1,627-ft. structure has three steel-arch spans on stone piers sunk as deep as 110 ft. When, during erection, hot weather caused arch sections to overlap where they should have joined, an assistant cabled the bridge's designer and chief engineer, James B. Eads—then traveling in Europe. His reply: "Pack the damn thing in ice; any darn fool would know that."



TIMBER TRUSS BUILDING—Occupying an area 265x742 ft., this 3-span building is part of the new Weyerhaeuser Timber Co. facilities at Springfield, Ore. Some 530 timber trusses ranging in length from 78 to 118 ft. were used in the construction of five buildings for the new sawmill facilities. All trusses were prefabricated and assembled at Springfield for erection.

Office building heat pump shows "fantastic" results

After a year of close observation of the operation of the unique heat-pump installation in a Portland, Ore., office building, engineers have recorded "fantastic" performance records for the installation.

In a paper delivered at the June semi-annual meeting of the American Society of Heating and Ventilating Engineers in Chicago, J. Donald Kroeker, Ray C. Chewning, and Charles E. Graham reported that the system was operating on the heating cycle far better than had been anticipated.

The heat pump—used for year-round air conditioning—was placed in operation in the Equitable Building in January, 1948. Of reinforced concrete construction, with extensive areas of double-glazed windows of heat-absorbing glass, the structure is 12 stories high and has an area of 100 ft. x 200 ft. in the basement, first and second floors; 60 x 200 ft. in the 3rd through 12th floors; a 13th-floor setback of half the latter area, and two penthouse levels.

The heat-pump, which draws heat from or deposits heat to an underground well, is used for cooling the structure in summer on a refrigeration cycle and for heating it in winter on a "reverse" refrigeration cycle (ENR Feb. 3, p. 65).

The coefficient of performance for the latter phase was predicted as 14.8 under normal conditions, before the installation was completed. This value was considered fantastic.

"Under study of day-by-day average temperatures from May, 1948, to March, 1949, the integrated load between the by-product heating curve and the actual average-load curve, plus the heating accomplished with waste chilled water, when related to heat input, develops the even more fantastic coefficient of performance 22.6 for compressors only," the engineers said. Without credit for by-product heat the coefficient is 5.6.

Although cost records are not complete and have not been fully analyzed, the engineers commented, "It is quite certain that the heating cost will be materially less than the $0.46 per million Btu. originally estimated."

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D. C. postpones enforcing new fire egress code

A fire egress code under consideration for the District of Columbia for several years (ENR Nov. 11, 1948, p. 74) is not yet in force because enforcement has been postponed several times to permit a thorough study to determine whether or not the requirements should be eased. The last postponement was from Jan. 1, 1949.

It is estimated that about 17,000 existing buildings would come under the proposed regulations for enclosed, fire-resistant stairwells and other safety features.

At recent hearings, among those calling for further delays of three months to a year were the Washington Property Owners Association, the Federation of Citizens' Associations, Federation of Civic Associations, and the Washington Real Estate Board.

Paul J. Miller, president of the Washington Guest House Association said that from $10,000 to $15,000 would be required to bring up to the code standards many 3-story houses now used as rooming establishments.

The new code was first proposed after fire disasters caused heavy loss of life in several cities, notably Atlanta, Ga., and Chicago, Ill.

Lincoln Electric Co. to build new $8.5 million Ohio plant

Construction will start soon on the Lincoln Electric Company's long-planned manufacturing plant in Euclid, Ohio, just outside Cleveland. An $8,500,000 contract for its construction was awarded June 20, and completion is scheduled for sometime next year. At that time all manufacturing operations will be transferred from the present plant—occupied since 1923—to the new one. The old plant probably will be sold or leased.

The all-welded, one-story plant with basement will contain over 850,000 sq. ft. of floor area, primarily for the production of electrodes and welders.

The entire plant is designed to reduce material handling to a minimum. A service floor containing cafeteria, locker rooms, dispensary and providing plant entrance and egress, will be placed beneath the production floor. The company's welding school and demonstrations also will be located on the service floor. Offices and research and testing laboratories will be centrally located on the production floor.

The all-welded steel-frame building will have aluminum siding, without windows. It will be air-conditioned. Fluorescent lighting will be installed in the area devoted to manufacturing welders and accessories, with incandescent lighting in the electrode-manufacturing area.

The Austin Company, contractors on construction of the plant, also prepared the design plans based on manufacturing requirements furnished by the Lincoln Electric Co.

◆

Groups hear of damage 'quake might have done

Had it lasted thirty seconds longer the recent Pacific Northwest earthquake (ENR April 21, p. 11) would have "virtually destroyed" the towns of Centralia, Olympia and Chehalis in southwest Washington, Alfred L. Miller, Northwest representative on the advisory committee on engineering seismology under the U. S. Coast & Geodetic Survey, told a recent joint meeting of the Seattle and Tacoma sections of the American Society of Civil Engineers.

Mr. Miller described earthquakes as potentially "the largest kind of disaster because of the traps man builds for man" and criticized building codes which contain no provisions dealing with particular features of earthquakes. Parapet type walls, in particular, drew his criticism.

Congress offers Colorado compromise

Congress has decided the California-Arizona fight over Colorado River water is too hot a political issue to decide even in this non-election year (ENR March 24, p. 19; see also p. 5 this issue). So Congress will compromise, authorizing power development of the lower Colorado but leaving in the air proposed irrigation and other consumptive uses of the water.

That apparently is the objective of a majority of House and Senate committees which have been considering the Arizona-California dispute for the past two months. Members of both groups admit they are seeking some middle ground between Arizona-backed legislation authorizing the $738-million Central Arizona irrigation and power project, and California-supported bills throwing the entire water fight into the U. S. Supreme Court.

Upshot probably will be early authorization of the proposed Bridge Canyon Dam and power plant, now included in Reclamation Bureau plans as part of the Central Arizona Project. At the same time, the authorization undoubtedly will delay irrigation phases of the project until settlement of the water controversy, probably by the Supreme Court.

Sees agreement soon

Sen. Joseph C. O'Mahoney, Wyoming Democrat, announced that a compromise along these lines already had been rejected in the Senate Interior and Insular Affairs Committee. But members of the committee feel that more carefully drafted proposal accomplishing the same results probably will be agreed upon in the near future.

The first committee compromise would have okayed the Central Arizona Project, as demanded by Arizona, and would have directed the Justice Department to institute legal proceedings to adjudicate the conflicting water claims, pleasing California. Irrigation features of the Central Arizona Project, however, would have been deferred pending settlement of the legal action.

Net result would have been a green light for construction of Bridge Canyon Dam and its 750,000-kw. hydroelectric generating plant, the principal non-irrigation features of the project. The Supreme Court's decision would settle the question of whether the irrigation facilities ever could be built.

This would satisfy neither state completely. Arizona wants Bridge Canyon in the Central Arizona Project, since the irrigation works would not be economically feasible without Bridge Canyon power revenues. California wants the entire Central Arizona Project rejected, since she feels the irrigation diversion would take water required in the future by California.

But congressional committeemen point out that both states need additional electric power, a need which Bridge Canyon could fill. And, they add, both states realize that unless some such compromise is made, the controversy, already 25 years old, may tie up development of the Lower Colorado indefinitely.

◆

NW power company asks FPC to OK Pelton Dam

The Northwest Power Supply Co., Portland, Ore., has asked the Federal Power Commission to issue a license for construction of a $12,775,000 hydroelectric project on the Deschutes River in Jefferson County, Ore. The proposed development is known as the Pelton Power Project (ENR June 2, p. 12).

Northwest plans to build a concrete arch dam 190 feet high and 850 feet long at the crest, forming a 7.2-mile reservoir in the narrow Deschutes River Canyon. A spillway tunnel would discharge surplus water below the dam. The powerhouse, immediately downstream from the dam, would contain two units made up of 52,000-hp. turbines and 40,000-kva. generators.

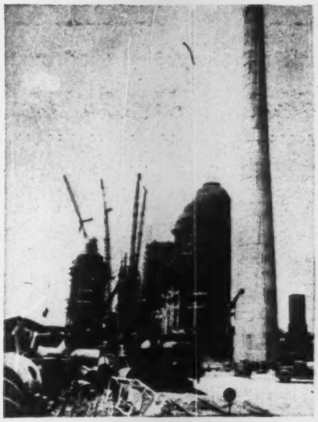
Estimated power available 90 percent of the time is 39,000 kw. with an annual energy output between 325 and 375 million kwh.

◆

FPC grants postponement of Kings River hearing

On request of the Fresno Irrigation District, the Federal Power Commission has postponed to Sept. 22 the oral argument on development of power resources in the Kings River Basin of Central California (ENR June 2, p. 5). Other participants in the proceeding agreed to the postponement. Argument had originally been scheduled for July 21, in Washington, D. C.

Both the irrigation district and the Pacific Gas and Electric Co. want to develop Kings River power. The Bureau of Reclamation has drawn up a plan for development of the entire Central Valley of California, including the Kings River Basin. An FPC examiner recently found that the public interest "will best be served" if the power resources are developed by the Federal Government (ENR Dec. 30, 1948, p. 23).



PACIFIC COAST PIG IRON production will double when this Kaiser blast furnace at Fontana, Calif., is finished in October. It will put out 1,200 tons daily and is part of a $35,000,000 expansion program at the plant. (Wide World Photo).

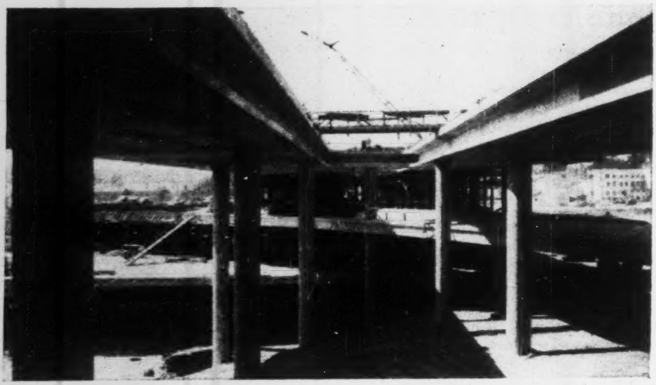
◆

Survey-map group asks U. S. to standardize map scales

The ninth annual meeting of the American Congress on Surveying and Mapping (ENR June 16, p. 13) adopted a resolution calling for action to standardize the government's topographic maps. The congress suggested appointment of a special committee to study and recommend possible standardization of U. S. topographic maps on three scales: 1:25,000, 1:50,000 and 1:100,000.

At present the federal government's civilian agencies—such as the U. S. Geological Survey—publish maps on scales of 1:24,000 and 1:62,500. Similar maps for military use—produced by the various services of the national military establishment—require scales of 1:25,000 and 1:50,000. These last-named scales are used almost universally throughout the world.

Conversion of domestic maps to military use—and vice versa—at present costs many thousands of dollars every year, the congress pointed out. Further, in case of a national emergency, time would not permit the necessary conversion of existing maps.



TRAFFIC SEPARATOR—Cars traveling four major Los Angeles highways will cross at four levels when this grade separation is completed (ENR Dec. 30, 1948, p. 9). Hollywood, Harbor, Arroyo Seco, and Santa Ana freeways will meet here. L. A.'s troublesome traffic problems are due mainly to the city's heavy concentration of autos—one for each 2½ persons. (Wide World Photo)

PRA to undertake study of rural road conditions

Chairman Dennis Chavez of the Senate Committee on Public Works recently asked Thomas H. MacDonald, commissioner of the Public Roads Administration, to undertake a study and make a report on the existing condition and future needs of rural local roads. The request for study came as a result of recent hearings on the Stennis-Young and Kerr bills to authorize over $100 million a year of federal money for farm service roads (ENR May 12, p. 51).

State highway departments, counties and related political subdivisions will cooperate in the survey. The study will give consideration to fiscal, social and economic aspects of the rural local road problem. In expectation that further federal-aid highway authorizations will be taken up in the next regular session, the Senate committee asked for the report Jan. 1.

◆

Private firms organizing to build Va.-N.C. road

Prospects for construction of a $2,000,000 ocean-drive connecting Virginia Beach and Nags Head appear more definite, with recent organization of the nonprofit municipal corporation known as the Carolina-Virginia Coastal Highway Corp.

The North Carolina State Utilities Commission has been requested to issue a certificate of convenience and necessity which will permit the construction of the highway and the charging of tolls. The toll road would extend about 54 miles along the strip of land between the Atlantic Ocean and Currituck Sound.

Harry McMullan, Jr., Washington, N. C., attorney for the corporation, said that work on the highway should begin this summer. Most of the rights-of-way have been acquired. Plans call for the North Carolina corporation to construct 34 miles within that state, and for a similar corporation in Virginia to build its portion. The road will start at the intersection of U. S. 158 and the old road to Duck, N. C. It will extend north from Duck along the ocean to Virginia Beach.

Provisions have been made for the state to take over the road at any time by assuming the unpaid obligations.

◆

Hearing held on proposed Hampton Roads auto tunnel

A vehicular tunnel to cross under Hampton Roads, Va., has been proposed at an estimated $40,000,000 cost by Samuel Rosoff, consultant of the Lower Peninsula Planning Commission. This proposal received consideration of a meeting of Army, Navy and civilian officials recently at Old Point Comfort, Va.

Navy men argue that ventilation shafts of the tube would further complicate already difficult navigation in the area. The commission's plan calls for two such shafts between the north terminal at Route 167 and the southern end at Route 17.

Proponents claim the tunnel would open a land route along the coast which would not by-pass the Hampton Roads area.

To start west extension of Penn Turnpike in fall

Construction on the $50,000,000 western extension of the Pennsylvania Turnpike from Irwin, Pa., to the Ohio border just east of Petersburg, Ohio, and 24 miles from Youngstown, (ENR Jan. 20, p. 63) will get under way "some time this fall," according to Pennsylvania Governor James H. Duff.

Duff said the Turnpike Commission is making immediate plans for financing the western link of the superhighway, which extends the toll road for a distance of 60 miles.

The extension will be built first from Irwin westward to Monroeville, where the Pittsburgh interchange will provide for a direct highway connection with that city. This portion will be opened as soon as possible.

The 100-mile, $75,000,000 eastern extension from Middlesex, near Carlisle, to King of Prussia, near Philadelphia, will be completely under contract by Aug. 1, the governor said.

The state will build an access road from the eastern terminus to the Philadelphia city line along the Schuylkill River.

Meantime, the Turnpike Commission reports that during the 12 months ended May 31, 1949, a total of 3,597,805 vehicles used the toll highway and paid $6,330,148 in tolls, as compared with 3,143,450 vehicles and $4,845,431 in tolls recorded for the previous fiscal year.

RECORD-MAKING PIPE PLANT—Concrete is being poured in 24-ft. pipe sections at the Stockton, Calif., plant of the United Concrete Pipe Corp., where record progress was made on casting pipe for the Mokelumne aqueduct (ENR Jan. 13, p. 5). The plant is now making 61-in. dia. pipe at rate of 21 sections a day for use on San Francisco's second Hetch Hetchy aqueduct.

Building machine exports hit record; drop—but good business—seen ahead

Experts forecast exports of U. S. machinery topping $42 million —Predict "normal" of about $21 million will be reached in 1952

By Seabrook Hull
Washington Staff

This year the dollar value of U. S. construction machinery exports to Western Europe will probably set a new record, one to top 1948's all-time high, when it hits $42,000,000.

But what about the future—1952-53 —when ECA is no longer around to pick up the check? Will exports drop back to 1938's dismal total of just a little more than $3,000,000? Chances are they won't; they'll probably level off closer to half the present rate.

Telling factor will be dollars. If there are plenty of dollars available with which to buy in the U. S. (the way it looks now, there won't be), purchases will remain fairly high. However, if European exports to the U. S. are low and dollar exchange is limited, ECA Europe won't be much of a market for U. S. production.

Excavators lead list

Biggest share of our construction machinery trade today is in excavators and parts—$23,000,000. These items accounted for more than half of 1948 shipments, and are expected to go even higher this year. Western Europe spent another $5,700,000 (in addition to the $42,000,000 for construction machinery) on track-laying tractors of 50 hp. and over while dependent overseas territories spent another $4,600,000. All-told they bought 1,303 units. Current rate of track-laying tractor exports in both cases exceeds 1948.

Other exports for calendar 1948 were as follows:

	$-millions
Dredging machinery	0.4
Concrete mixers	0.2
Graders (self powered).....	1.0
Graders to push or pull....	0.1
Scrapers—self-loading	0.9
Dozers	0.6
Road Rollers	0.8
Other, incl. parts.........	3.2

Market for excavators in the immediate future, as forecast by the countries themselves, is detailed in the table showing fiscal 1948-49 and fiscal 1949-50 buying plans.

Actually, Europe has a backlog of needed construction that won't really be caught up before 1960, if then. Ambitious programs in industrial plants, roads, housing, land reclamation, hydro-electric plant, and other fields are needed, not only to repair excessive war damage, but to make up for a good 20 years of comparative neglect as well.

All this means construction—big jobs that take heavy machinery. And compared to demand, Western Europe doesn't make heavy equipment. Nor do most items manufactured abroad incorporate latest technological improvements. U. S. equipment can do the job better and faster, and it will last longer.

Attempts are being made to produce equipment to meet U. S. standards: one make of scrapers and dozers in the United Kingdom and big (relatively) track-laying tractors in Italy are copied after U. S. types. But their production won't make much of a dent in demand. And U. S. manufacturers who have seen them claim they still don't stand up to American equipment.

In the case of really heavy, specialized equipment, the demand never will justify the cost of setting up production lines. American producers can count on keeping this market all to themselves.

Actually, current high rate of European buying is designed to fill a vacuum. Once filled, volume construction projects under way won't drop much, but equipment buying will.

It should level off to a normal replacement rate, which even so should be high, due to the large amount of road building, dam construction, etc., that will continue for another ten years at least.

It's still the mighty dollar that will determine how much American equipment Western Europe will buy.

Supply Status of Three Major Types of Construction Machinery in Western Europe for the Fiscal Years 1948-49, 1949-50

(Data is based on future estimates of countries themselves and may vary slightly from the actual situation.)

1948-49
$—thousands

Type of Machinery	Total Domestic Production	Exports To Participating Countries	Exports To Non-Participating Countries	Imports From U. S.	Imports From All Sources
Excavators 1 cu. yd. & over (Single bucket)	16,480	3,107	4,291	12,443	14,067
Excavators Less than 1 cu. yd.	40,522	4,580	9,517	2,575	4,970
Trench Cutting Machinery	1,465	74	303	292	550

1949-50
$—thousands

Type of Machinery	Total Domestic Production	Exports To Participating Countries	Exports To Non-Participating Countries	Imports From U. S.	Imports From All Sources
Excavators 1 cu. yd. & over (Single bucket)	22,000	4,810	6,700	13,021	14,744
Excavators Less than 1 cu. yd.	46,700	6,572	11,762	4,080	6,116
Trench Cutting Machinery	2,600	253	604	552	840

* * *

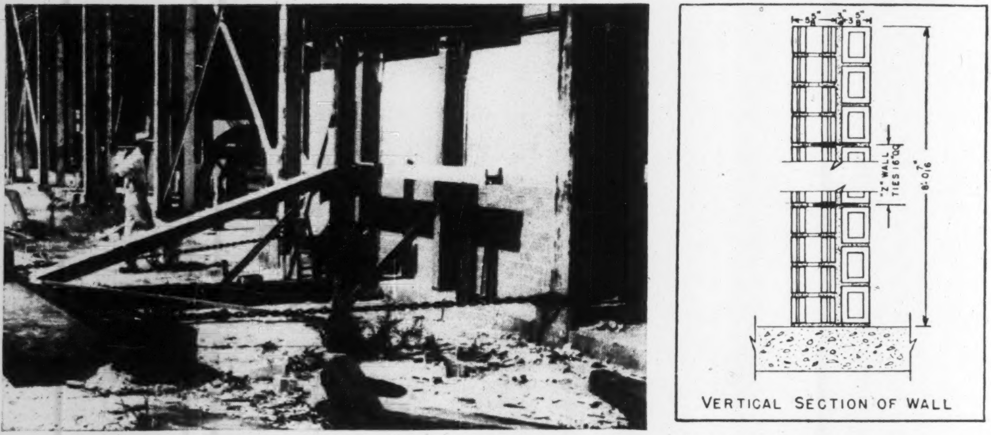
FHA to cooperate closely with "prefab" makers

Commissioner Franklin D. Richards of the Federal Housing Administration recently appointed Donald M. Alstrup, assistant commissioner, to serve as liaison officer with prefabricators in the industry.

Mr. Alstrup has been working closely with the industry in the insurance of loans to prefabricators under Section 609 of the National Housing Act.

His additional duties will include contacts with representatives of the industry on general problems that may arise.

Commissioner Richards said, "In addition to appointing a special liaison officer with the prefabricating housing industry the administration has been working toward the uniformity of minimum property requirements. This is of special significance to the manufacturers of prefabricated housing many of whom make dwellings for distribution on a national scale. Local variations in requirements create problems."



TILE WALL PANEL TEST—Resistance of structural clay facing tile walls to high velocity winds is under scrutiny of the Clay Products Association of the Southwest at the University of Texas, Austin. A test wall 10 in. thick, 10 ft. long and about 8 ft. high was made of two widths of tile bonded with mortar and standard Z wall ties. A load equivalent to 111 psf. in shear and 154 psf. in moment was applied through two vertical I-beams. This load—three times the pressure of a 125 mph. wind—caused a ¼-in. deflection which rebounded 85 percent. No signs of failure occurred, reports Prof. J. Neils Thompson.

G. B. Sowers to retire as Ohio works director

George B. Sowers, public works director of Ohio, will retire on July 31 to become a consulting engineer in the petroleum industry, dealing specifically with bituminous highway work.

However, he has agreed to continue part time with the state on Lake Erie shore erosion work. He was formerly chairman of the port and harbor commission of Cleveland.

A civil engineer graduate of Case Institute of Technology, Sowers was city engineer of Cleveland from 1914 to 1932, directing the construction of the Cleveland stadium and the $5,500,000 Cuyahoga River straightening, after which he was in private practice as a consulting engineer. During the war he served three years as a lieutenant colonel in the transportation phase of the Military Government Section, and saw service in the African, Italian and Korean campaigns in 30 months overseas.

◆

Ohio Valley phenol waste is 80 per cent eliminated

Eighty percent of the phenol waste from by-product coke plants, heretofore discharged into the Ohio River and its tributaries, has been eliminated, according to a statement released by the Ohio River Valley Water Sanitation Commission. This points to better quality drinking water in the future because phenol pollution has been one of the causes of disagreeable, medicinal tastes in community supplies during some seasons of the year.

The commission reached its conclusion from an analysis of corrective measures that have been taken by the major coke-producing plants in the Ohio River basin. These plants have placed in operation facilities for minimizing the objectionable effects of wash-water wastes either by installation of a closed circulation system with no discharge to the river or by recovery of phenol as a usable by-product.

The commission's investigation included all 23 by-product coke plants within the basin. Depending on location, these facilities remove from 80 to 99.5 percent of the phenolic compounds that otherwise would be discharged directly into the streams.

The report on phenol-pollution control was made by a committee of the commission consisting of the following state sanitary engineers: F. H. Waring, Ohio, chairman; F. C. Dugan, Kentucky; K. S. Watson, West Virginia; and H. E. Moses, Pennsylvania.

◆

Cohn warns N. Y. cities on pollution of streams

Morris M. Cohn, consultant to the Special Pollution Abatement Committee of the New York State Legislature, has warned cities and villages of the state to be ready for final orders on eliminating domestic pollution from state waters.

He told the recent State Conference of Mayors and municipal officials meeting in Syracuse, N. Y., that 115 communities needed treatment plants to handle raw sewage now dumped without treatment.

Cohn said the State Pollution Control board, created by the 1949 Legislature, will begin "at once" to classify the state's waters, according to their best use and will require compliance with standards set by the board.

The new law (ENR May 5, p. 18) provides a one-year period for compliance with board orders.

◆

Approve 7 new buildings for Oregon colleges

A program calling for construction of seven buildings at Oregon institutions of higher learning has been approved by the state emergency board and the State Board of Control. Total cost of the construction is fixed at approximately $6,000,000.

The program, submitted by the State Board of Higher Education, provides for the following buildings: Science building at the University of Oregon, $1,500,000; animal science and dairy manufacturing building at Oregon State College, $1,100,000; food industry building at Oregon State College, $1,000,000; library and class room building at Southern Oregon College of Education, $360,000; library and museum building at Eastern Oregon College of Education, $260,000; library at Oregon College of Education, $280,000; and a teaching hospital at University of Oregon costing $1,500,000.

ALSO RECORDED

Elevator Office—In a cotton research lab of The Springs Cotton Mills at Fort Mill, S. C., a special elevator will be used to move the office of President Elliott W. Springs "as is" from a cupola atop the building to the directors' room on the third floor so that he can arrive for meetings equipped with his files and secretarial staff. The office can also descend to a reception room on the second floor.

Worth Two in the Bush—Workers discovering two young robins nested in a pier of the high level bridge being built over the Monongahela River at Dravosburg, Pa., detoured work around the pier until the birds learned to fly.

Would Keep Corkscrew—Minnesota's highway department is building a new bridge across the Mississippi River at Hastings—but it won't replace the famous "spiral" bridge. It was planned to replace the unique spiral approach which now shortens the length of overhead structures extending into Hastings. But a local newspaper poll showed 95 percent of the citizens favored keeping the town's only claim to fame.

Railroad for Sale—San Francisco wants to sell the Hetch Hetchy railroad, built in 1916 high in the mountains of northern California to carry supplies to the dam which is part of the city's water system. The road now starts nowhere and goes nowhere. One railroad supply firm has offered $45,683 for 63 miles of rails, 500 tons of bridge girders, 25 freight cars, and three gasoline locomotives.

Not Enough—W. F. R. Ballard, New York architect, didn't charge enough for plans for a new housing project at Meriden, Conn., so the State Housing Authority held up award of a contract for the job. Prentice White, administrator, said the state group thought the fee for the $1,100,000 project should be about $50,000 under established standards. Mr. Ballard asked only $35,000.

Hiker's Paradise—New Jersey's road system has high rank in the rating of Milton Conover, of Newark, a hiker of international repute. He recently told State Highway Commissioner Spencer Miller, Jr. "Since 1939, I have walked entirely across New Jersey 20 times by 20 different routes, traversing afoot every single township and municipality . . . I am proud that New Jersey now has a highway system that might be rated with the best three that I have observed on five continents."

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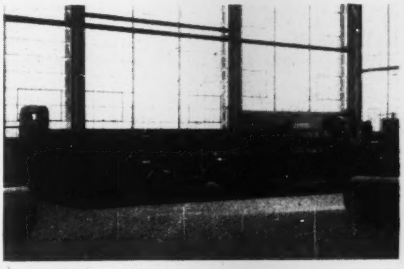

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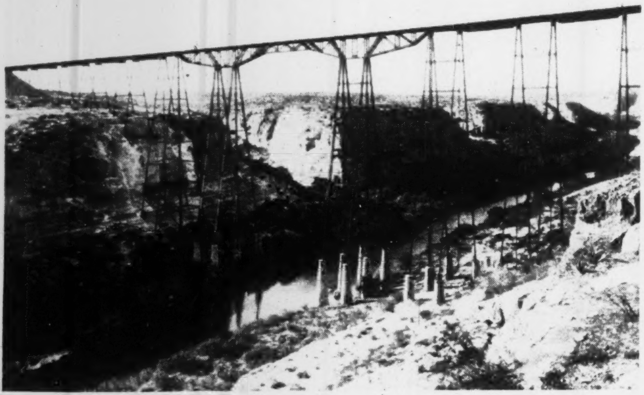
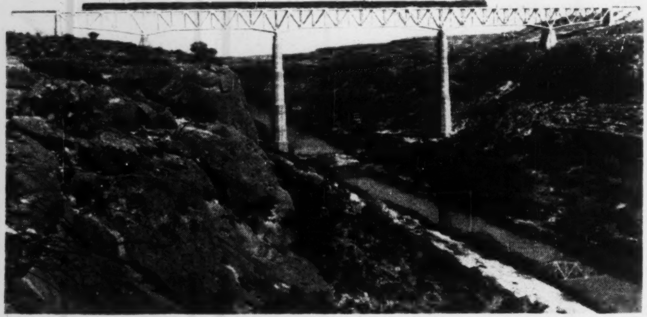


Famous Texas Railroad Bridge



Gives Way to New Structure

A landmark for more than 50 years, the spectacular Pecos High Bridge of the Southern Pacific Railroad near Comstock, Tex., is now being dismantled.

For many years the highest railway bridge in the United States, the spectacular, spidery-looking steel structure (see cover, this issue) has been replaced by a new steel cantilever bridge.

As originally constructed by the Phoenix Bridge Co. for the Galveston, Harrisburg & San Antonio Railway Co. (now a part of Southern Pacific System), the bridge was 2,180 ft. long and 321 ft. above the low water level of the barren, rocky Pecos River canyon. The structure was made up of two cantilever arms, each 85 ft. long, two tower spans each 33 ft. long, two lever arms 52 ft. long, and one suspended span of 80 ft. In addition, eight lattice spans each 65 ft. in length, one plate girder span of 45 ft. and 34 girder spans of 34 ft. each made up the total length.

Built principally of wrought iron, the bridge was designed for Cooper's Class A loading (E-25). In 1909, the load capacity was increased to E-55 by reinforcing the existing tower columns and adding a central line of columns and deck girders and trusses. At the same time, the length was reduced by filling in 665 ft. at the west side with rock and earth.

In 1929, the structure was inspected in detail and recomputed for its load capacity under the physical conditions existing at that time. After minor repairs had been made to strengthen and reinforce defective details, the bridge was rated good for Cooper's E60 loading for trains at a speed not exceeding 12 miles per hour.

Cable used in dismantling

Plans for the dismantling work were prepared for the Robinson Erection Co. of St. Louis, Mo. by Cyril S. Adams, consulting engineer of Houston. With the approval of the railroad, a cableway 1,515 ft. long was erected over the old bridge. This cableway, a single overhead wire cable stretched almost the length of the bridge, is held aloft by two steel towers 130 ft. high.

This method was selected because of the physical conditions. The crossing is so rugged at the gorge that it was not considered practicable to work from the ground. In addition, the cantilever type bridge must be dismantled exactly in reverse of the manner in which it was installed, in order to prevent structural failure.

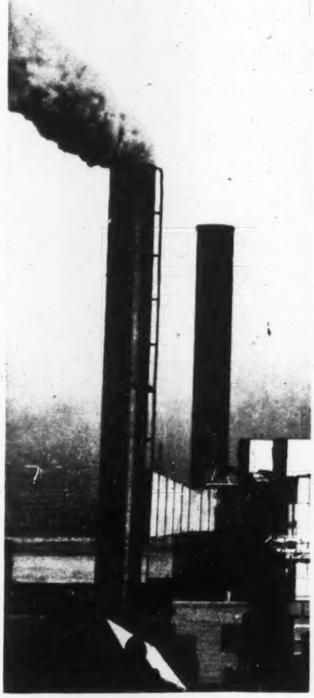
The main cable used for the dismantling work is 2¼ in. in diameter and has a minimum breaking strength of 363,000 lb. The strength permits single pieces of 25,000 lb. to be lifted even from the central sections of the bridge.

There are three sets of horizontal members that extend the full length of the bridge. The center member, weighing about 36,000 lb., is considerably heavier than the two outside members. The cableway will be used to support the center span on the two outside members, while workmen cut it in two and lift out each of the two pieces. Then the outside members, each of which weighs 25,000 lb., will be lifted out to clear the complete span.

The new bridge shown in the accompanying photograph was designed by the engineering firm of Modjeski & Masters. The structure was erected by the Bethlehem Steel Corp., which also did the fabrication work for the superstructure. Substructure work was handled by Brown & Root Construction Co. of Houston, Texas and track work by W. A. Smith Construction Co.

The new bridge consists of two 80-ft. deck plate-girder spans, two 160-ft. 6-in. anchor arms continuous with two 267-ft. 6-in. side spans, and a central cantilever span, 374 ft. 6-in. long. Southern Pacific operated the first train over the new bridge on Dec. 21, 1944, as part of a general program in line straightening and grade lowering started at the same time.

Tests Show Smog Collector Efficiency



SMOKE POURS OUT of one stack while the other—also in use but with precipitator operating—emits only a hardly visible vapor in a dramatic comparison test. St. Louis laws require only one-third the smog removal accomplished by precipitators in these Union Electric power station stacks.

C. H. Rulfs
Design Engineer
Union Electric Co. of Missouri
St. Louis, Mo.

ACCEPTANCE TESTS on two dust collectors at the Union Electric's Ashley Street power plant in St. Louis, Mo. revealed an efficiency of 95 percent—three times better than required by law.

A City ordinance, passed in March 1948, provides that flyash or dust discharged into the open air shall not exceed 0.85 lbs. per 1,000 lbs. of gases. At Ashley Street's normal boiler output of 300,000 lbs. of steam per hour each, the dust loading was 0.26 lbs. of dust per 1,000 lbs. of gas, and at maximum boiler load of 335,000 lbs. of steam per hour, the dust loading was 0.33 lbs. of dust per 1,000 lbs. of gas.

Modernization of this power plant was started during 1941, when two large boilers equipped with dust collectors were installed. The program was interrupted by the war, reactivated during 1946, and by the end of 1949 this station will have a total of five large boiler units in operation, all equipped with electrostatic type dust collectors. (Space is provided for a future sixth boiler unit. This station originally contained 54 boilers in an arrangement which made it impractical to install dust collectors.)

Union Electric has been engaged in a system-wide smoke elimination program, cooperating with St. Louis anti-smoke campaigns which began in 1938 and resulted in passage of a smoke-control ordinance in 1940. This ordinance was amended for flyash and air pollution control during 1948. All boilers installed by the company since 1938 are equipped with electrostatic precipitators, and plans are underway for equipping the older installations with dust collectors or firing the boilers with oil or gas.

Completion of the program has been affected by high-load conditions which prevented taking equipment out of service as well as material shortages.

Along with the installation of dust collectors, associated improvements have been and are being made to improve the combustion process, reduce smoke and permit more effective collection of flyash. These include installation of up-to-date pulverizing and burning equipment and partial use of oil and natural gas.

While all available types of collectors have been considered, electrostatic precipitators are used for all installations in an effort to secure high collection efficiency, with the knowledge that the installed cost would be substantially higher than that of other types. It is recognized that improvements are being made in other types of collectors and full consideration will be given to all practical designs on future installations.

Three main steam plants on the Union Electric system now have installed steam generating capacity of 7,130,000 lbs. per hour, of which 5,980,000 lbs. is equipped with dust collectors. By the end of 1950 steam-generating capacity will amount to 8,930,000 lbs. per hour with 7,780,000 lbs. equipped with dust collectors.

Other installations now in service or under construction represent an investment of $2,618,000, divided as follows:

Ashley St.	$403,000
Cahokia (Ill.)	1,300,000
Venice No. 2 (Ill.)	915,000
	$2,618,000

This is the actual cost of dust-collector installations and does not include any money spent on correlary improvements.

◆

Aluminum Co. has plans for big B. C. developments

Plans for Aluminum Company of Canada's engineering surveys for hydro development and plant site for a major refinery in west-central British Columbia have been disclosed at Vancouver by McNeeley Dubose, vice-president of the company.

The surveys are estimated to cost about $900,000, with much of the preliminary work being handled by B. C. International Engineering Co. Ltd, new International Engineering affiliate formed for the work, with W. J. Huber as general manager.

The surveys will involve mainly possibilities of a potential 2,200,000 hp hydro development in the lakes system contained for the most part by Tweedsmuir Park, and establishment of a plant either at Kitimat on Douglas Channel or on Dean Channel.

Further south, and nearer Vancouver, is a third hydroplant site possibility, Chilco Lake-Bute Inlet, where nearly 1,000,000 potential hp is available.

A power house at Kemano would serve either Kitimat or Dean Channel plants, and the lakes system could be developed for power in intermediate dams, since it would be eight years before the main Nechako Dam could be built and its full potential employed by backing up water.

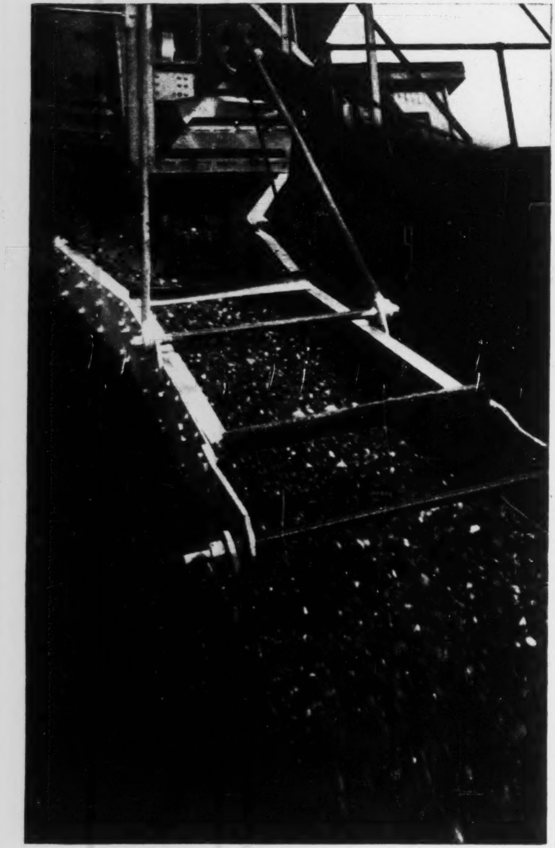
Development of power from the lakes system would involve two tunnels nine miles long and 27-ft. diameter leading southwestward from Eutsuk Lake to the Kemano power house.

Two obvious difficulties are understood to be mainly the problem of setting up a power line between Kemano and Kitimat in a region where glacial conditions exist; and the alternative problem of locating a power house on Dean Channel where the terrain is rocky and steep. Kitimat, it is understood, offers adequate possibilities for a plant site since it could be connected with the Canadian National Railways Prince Rupert Line at Terrace.

★ ★

If your equipment must withstand severe abrasion and heavy impact—*prolong its life with*

HADFIELD MANGANESE Steel



HADFIELD MANGANESE *plates, strip and sheets find numerous uses in conveyors, chutes, troughs and bins where high resistance to extreme abrasion and severe impact is essential.*

SOMEONE has very aptly described Hadfield Manganese as "the steel that gets better the harder you use it." And it's true. For this wear-resistant Alloy Steel has the unusual characteristic of markedly work-hardening under impact and as a result actually becomes more and more wear-resistant in service.

This desirable characteristic of Hadfield Manganese Steel pays off BIG in increasing service life of such equipment as chutes, bins, screens, tumbling barrels, and other applications where hard usage and impact abrasion are encountered.

In metal-to-metal contact applications, too, the superior ability of Hadfield Manganese Steel to work-harden offers important advantages. In cast pieces for railway crossings, frogs and switches, etc., where compressive loads or impact operate, Hadfield Manganese Steel develops a smooth, very hard surface that strongly resists wear—but does not abrade the contacting part.

Hadfield Manganese Steel also has outstanding toughness—even at low temperatures. At minus 100°F. it retains from 50% to 85% of its room temperature impact resistance. Thus it provides a valuable safety factor when used in appropriate applications which must operate at sub-zero temperatures or in Arctic climates.

Possesses Desirable Electrical Properties

From an entirely different angle, Hadfield Manganese Steel is of interest to manufacturers of electrical equipment. In the austenitic condition, Hadfield Manganese Steel possesses desirable non-magnetic properties. Fabricators will find its use for shielding undesirable stray currents and magnetic fields an important feature. Such applications as switchboard panels, conduits, lifting magnets, and transformer parts are a few of the many applications in this field.

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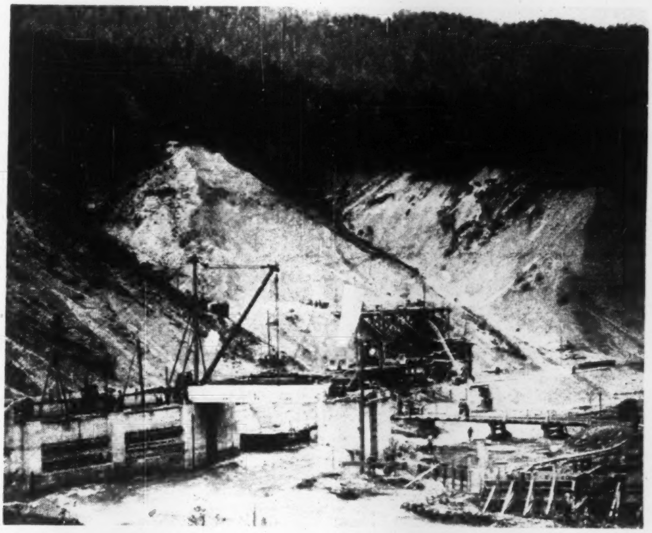


BAVARIAN DIVERSION JOB—An aqueduct now being built through two mountains and under one river will tap water from Rissbach in the Austrian part of the Karwendel Mountains (ENR July 29, 1948, p. 4). It will pass through Grasberg Tunnel; go by pipe under the Isar River; then pass through Hochkopf Tunnel into Walchensee. This is the reservoir for an existing hydro-electric plant which will have its output increased by 90,000,000 kwh. annually. Work on the tunnels—each about two miles long— began in October, 1947, and tunnel work finished up recently. Here, in the Austrian mountains the Rissbach leaves its former bed and flows into Germany. (Wide World Photo)

Transport

Mexico—Engineers have advanced a long-range plan to rebuild Mexico's railways which in most parts of the country are obsolete and have been outdistanced by competing truck and bus lines.

The new plan calls for expenditure of about $100 million, which it is hoped can be repaid out of increased earnings through modernization and extension of lines.

At the same time, real progress has already been made on some sections of the National Railways of Mexico. The rail line leading west from Mexico City to Acambaro has been changed over from narrow gage to standard gage, at a cost of $2,200,000.

Work will now start on widening of the main rail line heading south from Mexico City to Puebla and Oaxaca, a distance of 330 miles. This line is at present narrow gage.

Romania—The government has recently announced that work will begin immediately on a 60-mile canal connecting the Danube River east of Bucharest to the Black Sea at Constanta. It is understood that the long dreamed of canal, which will provide a shorter route to central Europe for Black Sea shipping, will have the technical and financial assistance of the Soviet Union.

Syria—Surveys have started on the Syrian section of the $200 million Trans-Arabian Pipeline. After much argument and delay, the Syrian government has finally approved the passage of the American-owned line across this country.

Originally, it was expected that the line would be completed by October of this year; now the job is expected to run well into 1951. When completed, it will carry 300,000 barrels of oil daily from the Arabian-American Company fields on the Persian Gulf to the Mediterranean port of Saida—a distance of 1,070 miles. It is expected that a saving of 33 cents a barrel will be realized against the cost of shipping by tanker through the Suez Canal.

Upon completion of the surveys in Syria, the route decided upon must be approved by the Syrian government, property lines must be settled and equipment must be brought from the U. S. before construction can start.

India—The central government will soon start work on its $15,000,000 expansion of Madras harbor. The first part of the plan calls for construction of a "wet dock" and a railroad marshalling yard on a 120-acre site. When finally completed, the expanded harbor will be able to accommodate 19 ships at a time instead of nine as at present and will handle nearly 3,000,000 tons of cargo at a time, 1,000,000 more than at present.

Miscellany

England—The possibility of a tunnel under the English channel, connecting the United Kingdom to the continent, recently has been called to the attention of the International Road Federation. Georges Gallienne, chairman of the European and Eastern Region of the IRF, has made a strong appeal for reconsideration of the subject, and stressed the importance of highway facilities in a project that had for the last fifty years been viewed from the angle of rail communications alone.

Plans for a subaqueous tunnel under the English Channel go back as far as 1802, when such a scheme, thought up by an engineer called Mathieu, was seriously considered by the Emperor Napoleon. Since that time, projects of varying merit have been put forward, until the year 1930, when the British Government rejected the favorable findings of a special committee by the narrow margin of seven votes. The subject then lost public interest until recently, when this new aspect was raised by the IRF representative.

British reaction to M. Gallienne's proposal that the tunnel be reconsidered was generally rather cool, and it was made clear that his plan was not being sponsored by IRF. However, it was noted that this new campaign not only had the backing of groups in Britain and France, but also in Sweden, Belgium, Holland and Switzerland.

Mexico—Work has started on construction of a 160-mile oil pipeline across the isthmus of Tehuantepec, and spokesmen for PEMEX (Mexican oil monopoly) hope that it will be finished this year.

The line will be the first cross-continent pipeline in Mexico, and it will connect Coatzacoalcos, on the Gulf of Mexico, to Salinas Cruz, on the Pacific Ocean.

MUNICIPAL AFFAIRS

Chicago Highway Work

The city of Chicago will ask for bids July 1 for the first construction work on the west side superhighway—a grade separation at Halsted Street. The total cost of "the west route", from South Lake Shore Drive to its western spur connections with Butterfield Road and Lake St. is now estimated at $90,000,000.

A number of grade separations and most of the grading on the Calumet Parkway (from 130th St., and Doty Ave. to the Tri-State highway at about 167th St.) are completed, ready for paving in 1950. The section between 130th and 142nd Sts., involving complicated railroad overpasses and bridges, has not been started, but four projects on that section will be built at cost of $2,099,000.

State St. will be widened next winter to conform to the Chicago River bridge width of 108 ft., from Kinzie St. to Chicago Ave. (The new bridge was opened to traffic May 30.) The street is now only 65 ft. in width.

Construction has started on the double-decking of Wacker Drive, between Lake and Randolph Sts., at a contract cost of $1,053,000. The two blocks from Randolph St. to Madison St. are on the schedule at an estimated cost of $3,000,000. The completed project will produce a double-decked Wacker Drive from Michigan Ave. to a connection with the West superhighway at a traffic interchange on the east side of the Chicago River between Harrison and Van Buren Sts.

N. Y. City street program

City officials said that repaving planned for this summer on 42d St., New York City, will include widening the heavily-used thoroughfare to bring its roadway to a fairly consistent width of 60 ft. from Second Ave to 12th Ave. At present the roadway varies from 55 to 60 ft. in width over this mile and a half stretch. There will be radiant heat installations to melt snow at pedestrian crosswalks at eight important 42d St. intersections.

The new elevated ramp of the Franklin D. Roosevelt Drive on the east side of Manhattan between 18th and 25th Sts., was opened to traffic June 6. The new structure, of cantilever design and provided with widely-spaced supporting pillars was built by P. T. Cox and J. P. Carlin, contractors, at a cost of $3,515,000. It has a wide sweeping curve and gentle grade approaches. It will separate express traffic from local waterfront commercial vehicles, and eliminate a bottleneck at the 23d St. intersection.

Work is starting at once on extensive alterations to the old Washington Bridge over the Harlem River at 181st St. under a $736,996 contract awarded by the N. Y. State Department of Public Works to Poirer & McLane. The reconstruction is to widen the bridge to conform to plans for the $53,000,000 Cross Bronx Expressway of which the improved and expanded bridge will form the westerly end. The expressway, also a state project, will afford a vehicular connection from the George Washington Bridge over the Hudson on the west to the Hutchinson River parkway and the Bronx-Whitestone Bridge on the east.

National Show Place

Transformation of the three square blocks north of Independence Hall in Philadelphia into a "National Show Place" was authorized May 25 by Governor James H. Duff of Pennsylvania.

The executive approved a state-city agreement calling for the improvement of the area as "North Mall" at a cost running into millions.

It gives the state departments of Forest and Waters, and Highways, authority to acquire the land and buildings from Chestnut St. to Race St. between Fifth and Sixth Sts. for the development of a plaza north of the hall in which the Declaration of Independence was signed.

MORE SAN FRANCISCO WATER—Another 24-ft. long reinforced concrete pipe section goes into the ground for the second Hetch Hetchy aqueduct crossing the San Joaquin Valley to double San Francisco's water supply. The contractor, United Concrete Pipe Corp., places 42 sections during an 8-hour shift.

Buildings in the area will be removed, with the possible exception of the old Free Quaker meeting house at Fifth and Arch Sts.

Under the agreement, the Department of Forests and Waters will be the state's agent in acquiring the property. The Highways Department will later pay for lands needed for roadways.

The Highways Department, under the agreement, will take over and widen Fifth and Sixth Sts. to 120 ft. In addition, there may be footpaths, roadways, dividing strips and planted open areas as agreed by the highways secretary and the Philadelphia Director of Public Safety.

The area between the two streets will be developed as a state park and will serve as an approach to Independence Hall.

Simultaneously the federal government is proposing a $4,435,000 development of a parkway eastward from Independence Hall. It will cover a three-block area between Chestnut and Walnut Sts. from Fifth to Second Sts.

Sewers and Water Supply

With programs calling for expenditure of more than $67,000,000 made public during the week, sewerage and water supply development remained in the forefront of municipal activities.

Biggest proposal was a $19,594,000 sewer construction plan for the years 1950 to 1959, prepared by the Metropolitan Sewer District Board of Louisville, Ky. The plan is a modification of a $17,227,000 program approved by city aldermen in January, 1948. The new program differs from the original in that it drops the projects already completed and adds $8,500,000 for a sewage treatment plant, and the necessary interceptor sewers to be built in Upper Paddy's Run Valley on the Ohio River. The interceptor sewers will eliminate 19 sewer outlets now dumping into the Ohio, and sewage now going into the river will be intercepted and fed into the treatment plant.

Revenue bonds, to be paid off by the approximately $1,500,000 yearly income the sewer district receives from sewer rentals, will finance the work.

Other major proposals were: the city council of Philadelphia, Pa., approved a $12,000,000 program for additional improvements in the municipal water and sewer systems, with $5,000,000 for water and $7,000,000 to the sewage and sewage disposal systems; Jefferson County (Birmingham, Ala.) voters will ballot July 12 on a $10,000,000 sewer bond issue, and the water works system management in Birmingham plans a $2,000,000 expansion and improvement. The filter capacity of the Shades Mountain plant will be enlarged as one of the projects.

According to H. W. Starick, city planning director of Dayton, Ohio, the long-considered water improvement program for that city will cost $6,293,591, and it is estimated that the new plant probably would require a 50 percent increase in the rates paid by city water users.

The often-threatened and long-anticipated formal court action to compel the city of Muncie, Ind., to construct sewage facilities for sections of the city not now provided with proper sanitary accommodations was filed in Circuit Court recently in behalf of the Indiana State Board of Health.

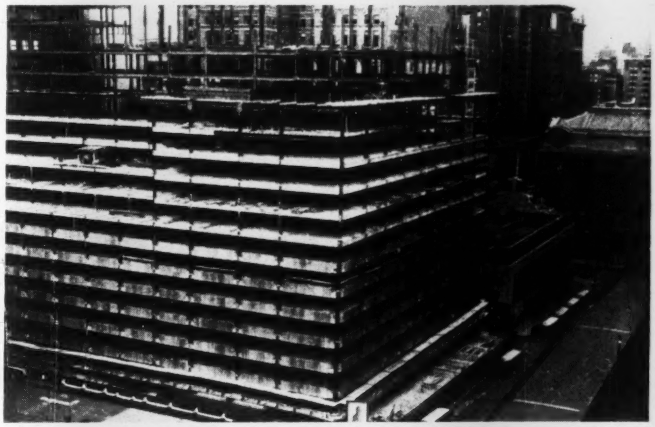
The Delaware Legislature, in the waning hours of its five-months long session, approved a bill to permit the city of Wilmington, Del., to proceed with the $7,000,000 sewer interceptor system, financed by bond issues to be paid by a sewer charge of approximately $7 a year for the average householder.

Jacksonville, Fla., plans to start work soon on its $5,000,000 water works expansion and improvement program, and in the meantime the $1,650,000 revenue bond issue to provide extension and improvements to the electric, water and sewer system of the city of Jacksonville Beach has been validated. So also have revenue certificate issues of $2,100,000 for Pensacola, of which $400,000 would be used for sewers.

More than $1,000,000 is expected to be spent in Columbus, Ohio, this year for storm sewers to relieve street and basement flooding. The money is part of $3,500,000 made available for sewer work in the 1945 "jobs and progress" bond issue. The 1945 estimates were based on surveys made in 1943. Therefore, because labor and material costs have risen sharply in the last few years, the available money will complete only about two-thirds of the original plans.

John W. Cunningham and Associates, Portland, Ore., consulting engineers, have been retained by Salem, Ore., to prepare plans and specifications for a new sewage treatment plant, for which a bond issue of $815,000 was voted at the May, 1948, election.

Five other Oregon cities are making progress in the campaign to end stream pollution, Curtiss M. Everts, Jr., state sanitary engineer, reports. Final plans for a treatment plant at Independence are nearing completion. Tillamook has awarded the contract for its treatment plant to Henshaw Bros., Portland, on a bid of $66,750. Central Point is calling for treatment plant bids. Woodburn's plans have been approved and Cottage Grove has retained a Medford engineering firm, Harvey & Watkins, to prepare plans for that city's interceptor sewers and treatment plant.



SKYSCRAPER GROWING—New York City's new 100 Park Avenue grows skyward toward a 36-story height, and is now half finished. Completion is due for next February, according to George A. Fuller Company, general contractor.

Work has begun on the new 1,355,000,000-gal. water storage reservoir four miles east of Findlay, Ohio. The project, including the reservoir, pumping station, dam, inlet structure, piping and roadways, will cost $1,200,000, financed by sale of first mortgage waterworks revenue bonds. The reservoir is being built near the 24-in. main that brings the water supply to Findlay from wells located 11 miles east of the city.

MUNICIPAL BRIEFS

Traffic Easer—Providence, R. I., received an $18,064,000 plan for solving its downtown traffic congestion, with opening of a number of new streets and squares.

Honolulu Works—Honolulu, T. H., has programmed $7,500,000 worth of public works projects to start in the rest of 1949. Included are: Sewers, $3,000,000; street improvement districts, $1,500,000; subdivisions, $1,500,000; street paving, $1,000,000; and a suburban water system, to cost about $500,000.

Baltimore Port Survey—Knappen Tippets Abbett Engineering Co., New York, has been chosen to conduct the forthcoming survey of the Port of Baltimore, Md., to be completed in about seven months. To cost about $50,000, the survey will be financed jointly by Maryland and Baltimore.

Air Pollution Control—Gordon P. Larson has been named director of the Los Angeles County Air Pollution Control District, succeeding Louis McCabe, who resigned to accept a position with the U. S. Bureau of Mines. Mr. Larson has been Dr. McCabe's chief assistant since Sept. 7, 1948. He is a graduate of West Point, and served 12 years with the U. S. Army Engineers. He will carry on the work begun by Dr. McCabe, which has included the launching of more than $4,000,000 worth of corrective installations to control smoke, fumes and dust.

Trucking Tenants Wanted—An invitation to over-the-road common carriers to submit formal applications for tenancy in the giant new $9,000,000 New York Union Motor Truck Terminal, nearing completion in Manhattan four blocks from the Holland Tunnel, has been issued by The Port of New York Authority. The New York truck terminal will be opened November 1, and a similar terminal in Newark to serve northern New Jersey, will be opened in 1950. The two projects will be the largest union motor truck terminals in the world.

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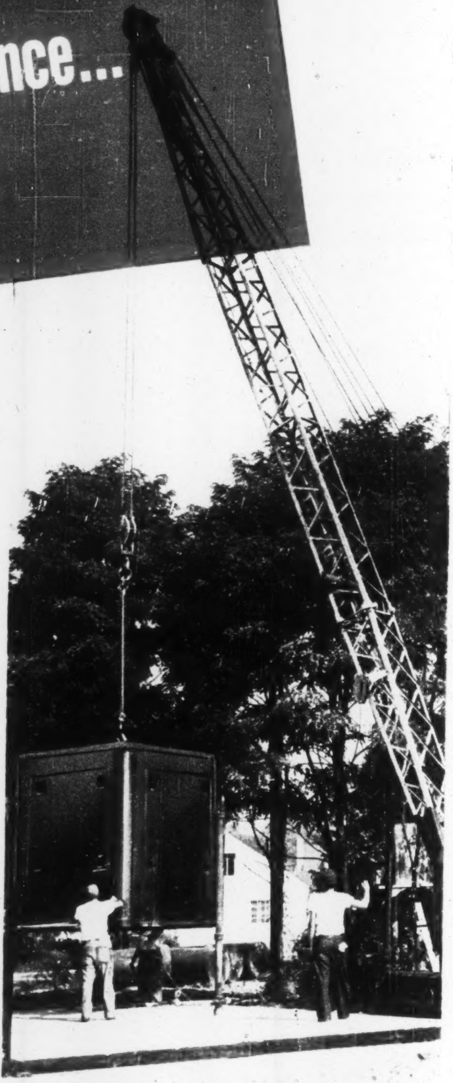

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A CENTURY OF CONFIDENCE

MEN AND JOBS

Col. Herbert D. Vogel, the Army's Buffalo, N. Y., district engineer since November, 1945, has been reassigned to the Panama Canal as engineer of maintenance. He will assume his new duties July 1, succeeding **Col. Charles G. Holle**, who will return to the U. S. for assignment to the Lower Mississippi Valley Division.

Colonel Vogel was commissioned from West Point in 1920 and completed further engineering study at the Engineer School of Fort Humphreys, Va., the University of California, and also in Berlin, where he earned the degree of Doctor of Engineering. During the war, he went to the Southwest Pacific Theater and was recipient of the Distinguished Service Medal.

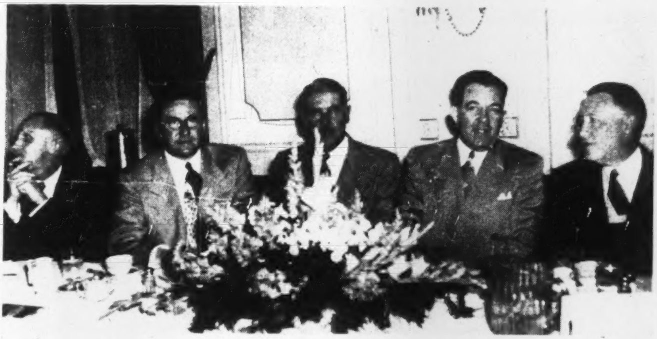
Maj. Robert J. Hall has been appointed special assistant in charge of flood control and construction programs in the Portland, Ore., District, Corps of Engineers. He succeeds **Lieut. Col. John W. Miles**, who has been named resident engineer at Detroit Dam, under construction on the North Santiam River in western Oregon. Major Hall, graduate of Marquette and Purdue universities, is a veteran of seven European campaigns.

Two new members have been added to the Alaska Road Commission staff at Juneau. They are **Kenneth F. Goodsen**, formerly of Oakland, Calif., chief assistant to **A. F. Ghiglione**, chief of the construction division, and **Eugene J. White**, formerly of El Monte, Calif., chief assistant to **G. M. Tapley**, who heads the engineering division.

Wm. F. Cavanaugh, highway commissioner of Milwaukee County, Wis. for 30 years, will resign on Aug. 1, having reached the age limit. He is a civil engineer graduate of Marquette University. When he started work for the county there were no concrete roads and he was active in the building of such roads from 1912 on.

Samuel B. Lincoln has been elected president of Lockwood Greene Engineers, Inc., Boston, New York, Montreal, and Spartanburg, S. C., succeeding **Chester S. Allen**, who is now chairman.

Carlton M. Roberts has resigned as city manager of Ft. Lauderdale, Fla., and **Edgar L. Patterson**, city engineer,



West Virginia's governor, Okey L. Patteson, and Charles M. Upham, engineer-director of the American Road Builders' Association, were the honor guests at the recent 27th annual banquet of the West Virginia Contractors' Association at Charleston. At the speakers' table are: left to right, John C. Cobb, Public Roads Administration engineer for West Virginia; B. F. Miller, American Road Builders' Association, Washington; West Virginia Road Commissioner Ray Cavendish; Governor Patteson and Mr. Upham.

Engineers witness ground breaking for Schenley's new wastes treatment plant at Cedarhurst, Md. Left to right, J. Henry Schilpp, sanitary engineer, State Water Pollution Control Commission; Paul W. McKee, executive secretary, State Water Pollution Control Commission; W. M. Bingley, engineer, State Health Dept.; Leon Small, Baltimore City Water Engineer; Louis Ningard, assistant superintendent, Engineering Division, Baltimore Bureau of Water Supply; George L. Hall, chief engineer, State Department of Health; E. S. Hopkins, principal associate engineer, Filtration Division, Baltimore Water Dept.; Elmer Wight, representative of Mayor Thomas D'Alesandro of Baltimore; W. S. Hamill, chief, Maryland Development Bureau.

George W. Pracy, right, has succeeded retiring Nelson A. Eckert as general manager of the San Francisco Water Department. He has been superintendent of the department's city distribution system. The 70-year-old retiring chief, who plans to set up a consulting practice, had served in city engineering posts for 36 years. He was one of a group of engineers assembled by O'Shaughnessy to plan San Francisco's Hetch Hetchy water and power system. He supervised construction of the city's two largest reservoirs. Pracy was with the Spring Valley Co. from 1909 to 1930 and has been with the city water department since that time. He was national president of AWWA in 1932-33. Both men are graduates of the University of California.

will act as such until a successor to Mr. Roberts is appointed.

Walter J. Ryan has opened an office at 901 Rust Building, Tacoma 2, Wash. He has been employed in the Pacific Northwest on irrigation, railroad and lumbering projects since graduation from Cornell in 1906 in civil engineering. He will be a consultant on transportation and logging.

Award of the U. S. Interior Department's distinguished service gold medal has been made to **John K. Roherer**, Yuma, Ariz., who retired as engineer in charge of the Lower Colorado River irrigation works. He served 34 years in government service, and was in charge of the All-American Canal, Imperial Dam and other structures.

The Geological Survey has announced the following changes in personnel: **Harlan M. Erskine** is district engineer of the Bismarck, N. D., office succeeding **R. E. Marsh**, now district engineer in Juneau, Alaska. Mr. Erskine previously was district engineer at Charleston, W. Va. **John C. Berkenbosch** was transferred from Ocala, Fla., to be in charge of the St. Louis, Mo., office. **John W. Odell** was named engineer in charge of the Ithaca, N. Y., office. Previously he was in charge of the St. Louis office. **Joseph I. Perrey** was made district engineer at Charleston, W. Va., to succeed Mr. Erskine, having been transferred from the Indianapolis office.

George W. Howie of Portland, Ore., has assumed his new duties as city traffic manager for Cincinnati, Ohio. He was assistant traffic engineer at Portland since 1943.

W. H. Weir, engineer for the Georgia State Department of Health, center, looks over the industrial water system at Savannah, Ga., with Odell W. Gray, plant operator, left, and Supt. B. J. Sams.

Elections and Activities

Edgar F. Copell, traffic manager for the Massachusetts Department of Public Works, has been re-elected president of the Massachusetts Safety Council, one of the oldest safety organizations in the country.

Newly installed officers of the Engineers' Club of St. Louis, Mo., are President, D. Earl Salveter, executive vice-president, Woermann Construction Co., first vice-president, William J. Hedley; second vice-president, M. D. Dawson; third vice-president, N. J. Campbell; treasurer, E. E. Bloss, and secretary, W. E. Bryan.

T. F. Royall of Wadesboro, N. C., district engineer of the North Carolina Highway Department, has been elected president of the State Highway Employees Association. He has been serving as vice-president of the group and succeeds Earl A. Crump, of Wilson, assistant fifth division engineer, who has resigned to accept appointment as a member of the State Personnel Council. K. R. Scott, bridge superintendent, of Greensboro, was named vice-president of the association, succeeding Royall.

Howard Smith of New Smyrna Beach has been elected secretary of the All Florida Highway Association Council. A. C. Slaughter of Orlando was made president; J. Peter Knowles, Jacksonville Beach, first vice-president; R. A. Liggett, Tampa, second vice-president; and W. P. Langdon, Winter Haven, treasurer.

George Nicastro of New York City was installed as president of the New York State Society of Professional Engineers at a meeting in Binghamton, N. Y. He succeeds W. W. Perry of Binghamton. Other new officers are: First vice-president, Robert A. Sovik, Syracuse; second vice-president, Charles B. Molineaux, Long Island City; financial secretary, Earnest F. Fox, New York City; treasurer, Patrick M. Corry, New York City, and directors, Mr. Perry and William H. Larkin, New York City.

Midwestern chapter, Ohio Society of Professional Engineers, has elected Ralph Scanlin, Sidney, president; Joseph O'Brien, Greenville, vice-president; and Burton A. Taylor, Sidney, secretary-treasurer.

John V. Lewis, city superintendent of public works of Rochester, N. Y., has been elected president of the Society of Professional Engineers, Monroe Chapter, succeeding Lewis Sforzini. Other officers are: vice-president, Harold Mosher; secretary, Dilwin Jackson, and treasurer, Domenic Masucci.

B. P. Shook, Raybestos-Manhattan, Inc., has been elected president of the Engineers Club of Birmingham, Ala., succeeding Arthur J. Blair. Other officers: T. E. Gilliam, Continental Gin Co., vice-president, and R. A. Davis, Chicago Bridge Co., secretary-treasurer.

Toledo chapter, Ohio Society of Professional Engineers, has elected Arthur E. Fryer, consulting engineer on materials handling and plant layout, as 1949-50 president. E. V. Newman, vice-president; Guy E. Neeper, secretary; C. W. Cisco, treasurer; R. E. Hall, C. E. Hatch, and H. H. Kerr, directors; and R. M. Hanselman, Rossford, director for Wood County.

A. L. Thurman, engineer for Aetna-Standard Engineering Co., Youngstown, Ohio, has been elected president of the newly organized Mahoning Valley Technical Societies Council. I. O. Oehler was elected vice-president; E. J. P. Fisher, secretary; and H. R. Carle, treasurer. H. R. Carle and C. V. Long represent the Mahoning Valley Society of Professional Engineers on the board of governors.

Clyde A. Dillon of Raleight, N. C., has been elected president of the North Carolina Engineering Foundation which promotes engineering and research at North Carolina State College and provides financial support for such purposes. He was named at a meeting of the executive committee, and succeeds the late J. M. Broughton of Raleigh. Other officers are: Harry H. Straus of Brevard, vice-president; R. D. Beam of Raleigh, secretary; and J. G. Vann of Raleigh, treasurer.

MAJOR MEETINGS

American Society for Testing Materials, Chalfonte-Haddon Hall, Atlantic City, N. J., June 27-July 1.

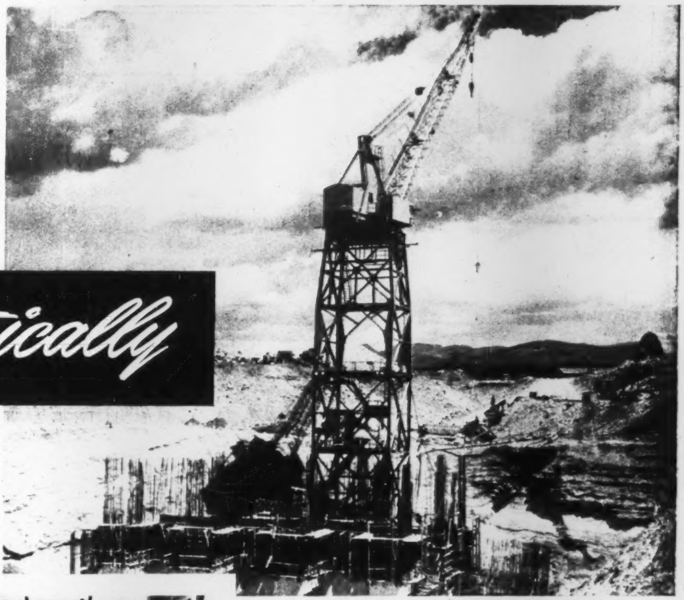
American Society of Civil Engineers, Hotel Prado, Mexico City, July 13-15.

Concrete Reinforcing Steel Institute, The Greenbrier, White Sulphur Springs, W. Va., July 14-16.

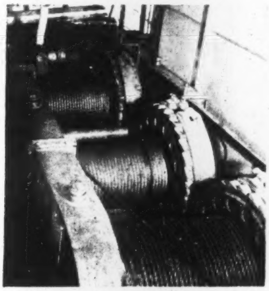
Pan American Engineering Congress, Rio de Janeiro, Brazil, July 15-24.

swing and hoist

... Electrically



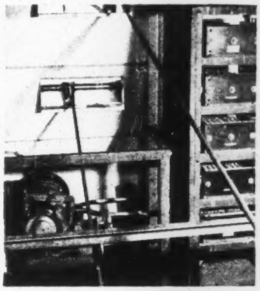
G-E equipped Colby crane at work on site of Granby Pumping Station



Hoist assembly consists of cable drums and General Electric 100-hp motor

Operator at controls of Colby crane, spotting loaded concrete buckets

Inspection and maintenance of the G-E control equipment is easy



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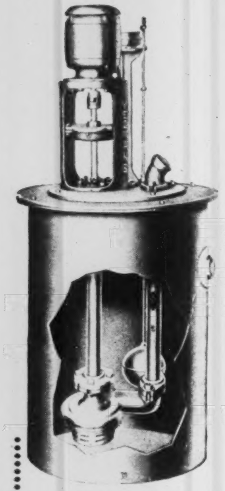

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OBITUARY

Walter L. Lewis, 64, a civil engineer in the water division of Buffalo, N. Y., died in that city June 11. He worked for the State of Indiana on road construction projects before going to Buffalo in 1933. He had been employed since then in the water division's pipe extension department. He was a graduate of Swarthmore College.

Charles Randolph Thomas, Jr., 61, former editor of technical publications, died June 6 in Alexandria, Va. From 1933 until his retirement in 1947, he was with the PRA.

William F. Harley, 89, former Blackford County surveyor and a former city engineer at Hartford City, Ind., died June 11 in Plainwell, Mich.

T. R. Countryman, 92, pioneer engineer in Minnesota, died June 13 at Minneapolis. A graduate of Washington University, St. Louis, Mo., he was early associated with the Great Northern Railway Co. and produced the drawings for that railroad's stone arch bridge over the Mississippi River. He built the tunnel which drained the Cripple Creek, Colo., gold mine and also the tunnel which drained Denver. He helped survey the Mexican National R. R. in 1890, and surveyed for the Eastern Railway in Uruguay.

Benjamin Feland Groat, 82, a construction engineer known for his inventions in engineering equipment, died June 15 in Hightstown, N. J. He lived in Philadelphia. He was graduated from the University of Minnesota school of engineering in 1901. He is credited with developing precise turbine engine tests and with measuring water chemically. He planned and directed dredging and power improvements at Grasse River, N. Y. He was awarded the Norman Medal of the ASCE in 1917.

Paul Jones Essick, Jr., 60, a civil engineer and deputy chief of the Philadelphia, Pa., Bureau of Highways, died June 16. He entered the bureau in 1912 and was appointed deputy chief 20 years ago. He was a graduate of the University of Pennsylvania.

Samuel R. Jones, 70, a director and vice-president of the J. G. White Engineering Co., New York, died at Cranford, N. J., June 18. After graduation from the University of Pennsylvania in 1899, he worked as a draftsman and estimator for the Phoenix Bridge Co., The American Bridge Co. and the Phoenix Iron Co. In 1905 he joined the White firm as an engineer and engineering manager. He was made a director and vice-president in 1932 and traveled in France, Haiti and Venezuela for the company.

Geo. A. Scarcliff, 62, chief sewer engineer for Milwaukee, Wis., died June 2. He received his civil engineering degree from the University of Wisconsin in 1911. Upon his graduation he did surveying work on drainage projects in northern Wisconsin, and then spent 14 months in Brazil surveying for a mining firm. He joined the faculty of the school of civil engineering at Marquette University in 1915 and was active head of the school until 1923 except for a year and a half when he was in the Army Engineering Corps during World War I. He also started the department of civil engineering in the University of Wisconsin extension school in Milwaukee.

Walter Ambrose Bishop, 73, chief engineer for the Pocahontas Fuel Co., died June 10, at Bluefield, W. Va. A veteran engineer, he was instrumental in the development of oil treatment to check dust, and was the engineer responsible for building the 19-mile drainage tunnel which connects Pocahontas Fuel Co. mines along the West Virginia-Virginia border.

Chester Allen Hogentogler, 62, retired chief of the soil mechanics research division, Public Roads Administration, died June 18 in Washington, D. C. He was graduated from Pennsylvania State College with a civil engineering degree and later taught engineering at the University of Idaho before going to Washington to join the PRA. He had been chairman of the Department of Soils Investigation of the National Academy of Sciences' Highway Research Board; committee on soils for engineering purposes of the American Society for Testing Materials; committee on stabilized roads, drainage and compaction of the American Road Builders' Association, and Division I of the American Association of State Highway Officials' committee on materials. Author of "Engineering Properties of Soil," Mr. Hogentogler had received the Dudley Award of the American Society for Testing Materials and the Bartlett Award given by the ARBA.

Oswald T. Dunn, 69, formerly a civil engineer with the Louisville & Nashville and Illinois Central railroads, died at Winnebago, Ill., June 9.

Ralph S. Bubb, 65, a PRA architect and designer of housing, died in Washington, D. C., June 11.

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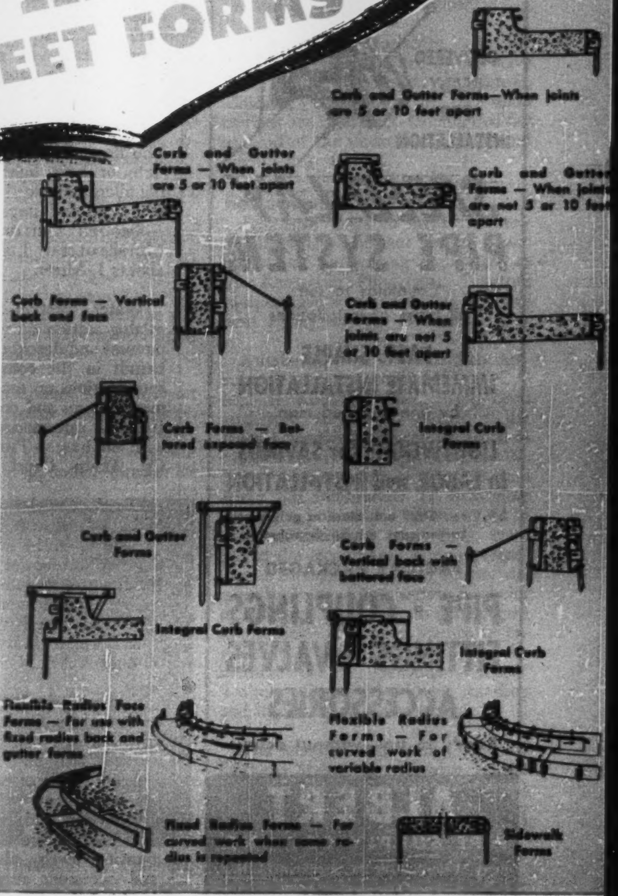
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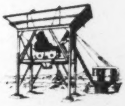

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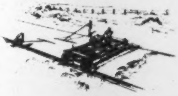

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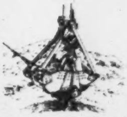
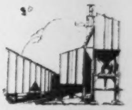


CLAMSHELL BUCKETS



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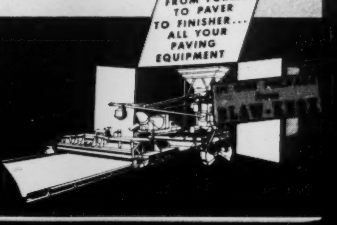
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Water Suction Hose—A 4-page catalog section on water suction hose pictures and describes each of the hose brands in the company's line, gives specifications on each and lists recommended uses and conditions. Also included is information on fittings used with the hose.—The B. F. Goodrich Co., Akron, Ohio.

Diesel Crawler Tractors – (Four folders) Deal with diesel tractor models TD 6, 9, 14 and 18, ranging in drawbar horsepower from 29.5 to 80.5. Information includes detailed specifications for each model and description of principal mechanical features.—International Harvester Co., 180 N. Michigan Ave., Chicago 1, Ill.

Surveying Instruments – The 51st edition of the Gurley "Manual of Surveying Instruments" has been published. This new addition combines specific details of adjustment of Gurley instruments with related factual information and practical instruction data on the care and handling of all transits, levels, alidades, compasses, and accessory surveying equipment. Included is a complete explanation of the theory and application of the Beaman Stadia Arc, types of reticles and reticle patterns for particular purposes, level vial construction and use, as well as assorted tables of logarithmic and natural functions, distance and elevation stadia readings. Copies available to engineers at $1.00 a copy.—W. & L. E. Gurley, Troy, N. Y.

Relief Valves—A bulletin contains the latest information on forged steel relief valves. Included is complete information on dimensions and weights, design detail, and correct installation. Edward all-steel relief valves are designed for a basic steam, oil or vapor working pressure of 600 lb. at 850 F, but can be furnished with special carbon springs for more severe service conditions. — Edward Valves, Inc., subsidiary of Rockwell Mfg. Co., East Chicago, Ind.

New C Tournapull—Information on the new electric-control C Tournapull is given in a broadside, TP-167. In addition to presenting specifications on this 150 H.P. 16-ton capacity rig, the broadside features action pictures showing this Tournapull working in mud, in tough sand, on steep grades, and making job-to-job moves over the highway. It also describes main design features.—R. G. LeTourneu, Inc., Peoria, Ill.

Crane Carrier — Description and specifications of the Model 83CC crane carrier are contained in Bulletin No. 249. This carrier is an independently powered 35-mph. truck-type chassis upon which is mounted a heavy-duty ¾-cu. yd. upper deck capable of lifting crane loads up to 20 tons, and is convertible to all front-end attachments. — The Byers Machine Co., Ravenna, Ohio.

Tagline—These "Tag-Master" advantages are outlined in a circular: Its pull is automatic and adjustable to suit the job, remaining constant and uniform at truck level or 70 ft. below machine; pull can be increased instantly with manual control feature to manipulate a clamshell or grapple; loading and casting are accurate without moving boom; and it permits digging over a 25-ft. range without moving the boom or machine.—Morin Mfg. Co., Inc., West Springfield, Mass.

New Diesel Engine—Catalog features Mack Trucks' newly designed 4-cycle, 6-cylinder, 150 h.p. diesel engine which has automatic timing, controlled combustion and fuel distribution. A companion publication is a 67-page booklet on "Understanding the Automotive Diesel."—Mack-International Motor Truck Corp., 350 Fifth Ave., New York 1, N. Y.

Studwelding Equipment—Parts and accessories for use with the Nelson stud welding gun are identified and priced in an 8-page bulletin. Items include special leg attachments, adaptors, spark arresters, and a number of complete accessory kits for special purpose applications. — Nelson Stud Welding Division of Morton Gregory Corp., Lorain, Ohio.

ENGINEERING SCHOOLS

New Curricula at Case

To provide a broader education for engineering students while at the same time giving them a sound technological course, Case Institute of Technology, Cleveland, Ohio, has adopted new curricula for all its degree granting departments.

Freshmen will give one-sixth of their time to a course in "Backgrounds of American Democracy" and sophomores and juniors one-fifth to a two-year course in "The History of Western Civilization."

The first course will analyze American democracy and compare it with that under other systems of government. Similarly, the western civilization course will take up the forces in economics, science, art, religion, music, politics and literature, that have affected the human race since the time of Greece.

To direct these streamlined courses, President T. Keith Glennan has created a Division of Social-Humanistic Studies with Robert L. Shurter, head of the department of language and literature, as the first director.

In the senior year engineering students will take a minimum of two elective social-humanistic courses.

Ability to use oral and written English effectively is stressed strongly in the new program even though only one three-hour course throughout the freshman year is required. Students who, by the end of the first year have not attained the minimum standards required in writing and speaking, must take a remedial non-credit six week's summer course between the freshman and sophomore years. Students found deficient in their use of the language in the sophomore, junior or senior year for a remedial program will be referred to the English department by their major professors.

Lath and Plaster Research

At the Armour Research Foundation of the Illinois Institute of Technology, Chicago, a research program was recently completed on the subject of lath and plaster. This was under the sponsorship of the U. S. Department of Commerce, and was part of the foundation's continuing research in housing and building materials. The study was directed primarily to the behavior of plaster and its supporting structure under various loading conditions.

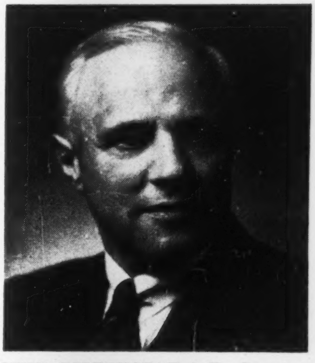
Results of this research are presented at length in the U. S. Department of Commerce report on "Standardized Lathing and Lathing Practices." This 279-page report is available at $3.50 a copy from the Office of Technical Services, U. S. Dept. of Commerce, Washington, D. C.

Faculty News

Robert E. Doherty, 64, president of Carnegie Institute of Technology Pittsburgh, will retire July 1, 1950. Dr. Doherty became president of Carnegie Tech in 1936, going there from Yale University where he was dean of the school of engineering. His successor will be John C. Warner, head of the chemistry department.

Paul E. Hemke has been made dean of the faculty at Rensselaer Polytechnic Institute, succeeding Matthew A. Hunter, retiring after 40 years at RPI. Dr. Hemke has had a distinguished career in aeronautical engineering and research. Formerly he was director of aeronautical engineering at Case Institute of Technology.

William Elton Adams, Sr., who went to North Carolina State College, Raleigh, in 1939 as instructor of engineering drawing and descriptive geometry, has been appointed director of instruction for the school of engineering, to succeed L. L. Vaughan, 65, who will retire June 30 after 41 years in the engineering department.



NEW DIRECTOR–Karl T. Compton, chairman of the Research and Development Board of the National Military Establishment, and chairman of the Corporation of the Massachusetts Institute of Technology, and, until recently, its president, has been elected a director of the McGraw-Hill Publishing Co. During his career, Dr. Compton has held many important public and private research and administrative positions. He will advise the company particularly in connection with its publication of technical books and magazines for students, constructors, and engineers.

Promotions on the civil engineering faculty at the University of Washington, Seattle, include that of H. K. Moritz from associate professor to professor, and T. H. Campbell and H. M. Chittenden from assistant professor to associate professor.

Randolph P. Hoelscher, who has been dean of engineering at the Navy Pier Branch, University of Illinois, Chicago, will return to the main campus at Champaign-Urbana this fall as head of the department of general engineering drawing.

Educational Notes

Extensive plans to erect two new buildings this summer and to make alterations to existing buildings on the Rensselaer Polytechnic Institute campus have been announced by President Livingston W. Houston.

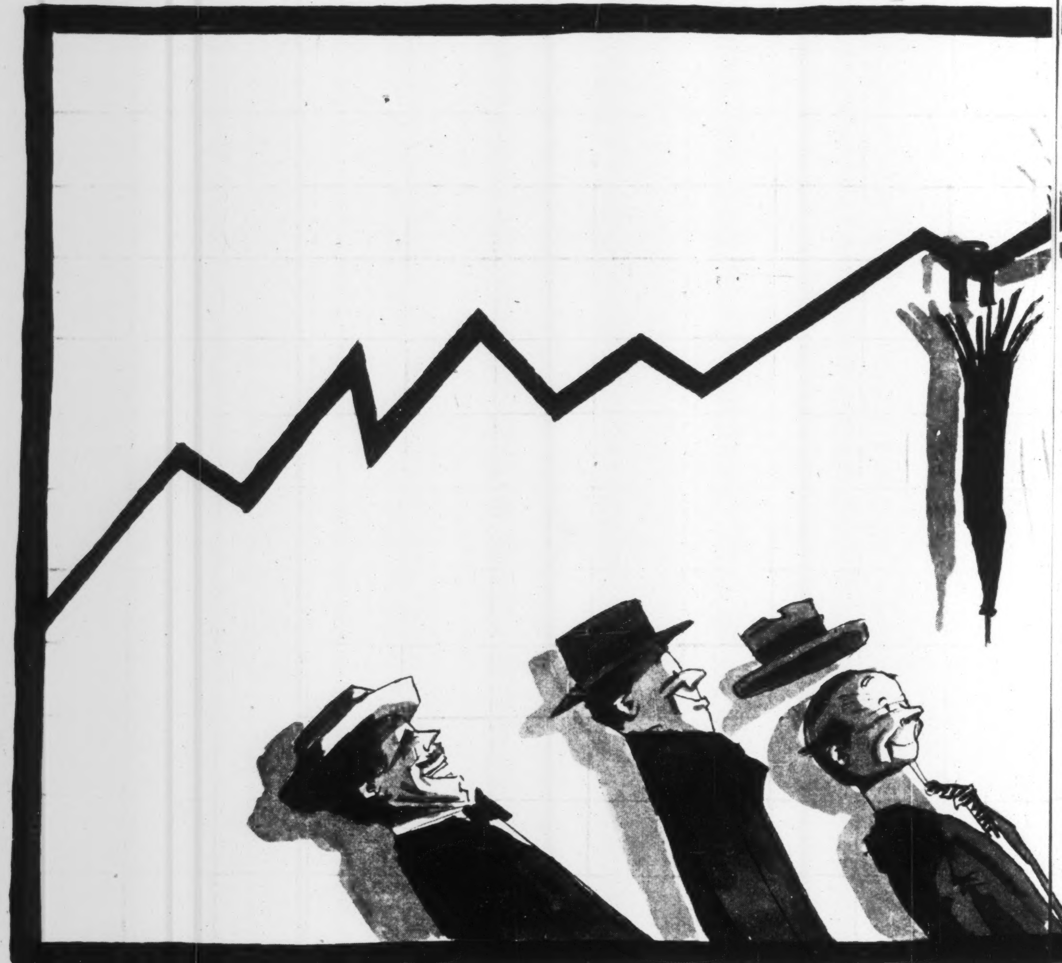
Scholarships in 10 Canadian universities and the Royal Military College at Kingston, Ont., have been established in memory of men of the Royal Canadian Engineers who died in the Second World War, Col. H. W. Love, chief engineer of the Canadian Army, has announced. To be eligible for the scholarships, valued at $125 each, a candidate must have completed the second year in courses leading to bachelor of applied science degree, bachelor of engineering, bachelor of architecture or an equivalent degree in the fields of applied science or engineering. Candidates must also be member of the Canadian Officers' Training Corps. Academic standing and leadership will be considered.

The school of engineering, at North Carolina State College, which has the largest enrollment of any school at the college, now has a student body of 2,461, including 730 seniors and 81 graduate students.

Dean John W. M. Bunker of the Graduate School of Massachusetts Institute of Technology has announced that a new degree of "Engineer" will be granted there. It will require about two years' study following a bachelor's degree in any of the institute's various engineering departments. Dean Bunker said: "The new degree fills an educational need for the development of professional engineering competence at a higher level than is ordinarily represented by the Master of Science degree."

Down with Insurance

(A MOST AMAZING AD)



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by Mr. Friendly

IF this ad doesn't sell you on American Mutual, then you just don't care about *money!*

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In 2 years we helped bring a Virginia contractor's rates down to *27.4% below the average.*

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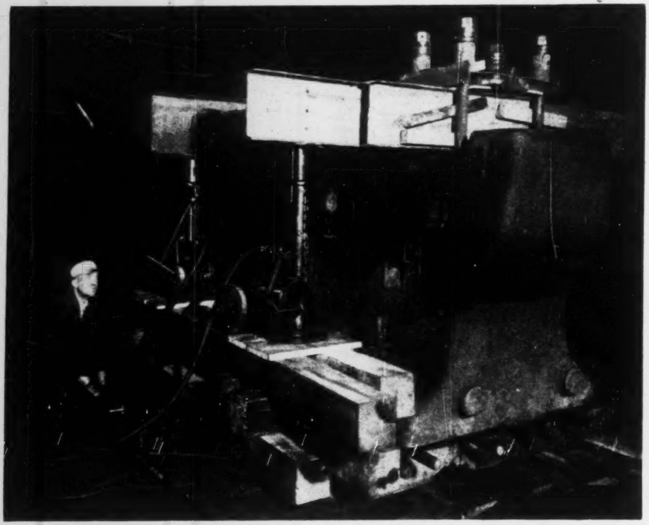
NEW PRODUCTS

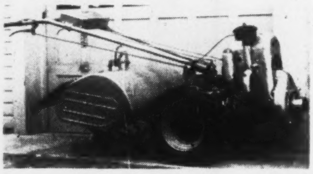


Air-Driven Power Jacks Have a 100-Ton Capacity

Power jacks with capacities of 20 to 100 tons are useful for rigging and handling heavy industrial machinery, sinking piling, straightening steel pipe, pushing pipe and other general maintenance operations. The Duff-Norton power jacks are operated by an integral air motor operating under air pressures of 80 to 90 pounds. Long trundling handles and collapsible spotting handles make the jacks easy to move and place. Solid-rubber-tired roller-bearing wheels facilitates easy long-range movements over rough surfaces or soft ground. Raising and lowering operations are controlled by the air motor, and an automatic shut-off prevents the ram from leaving the housing and spilling the load. The jacks are designed to prevent lowering or creeping in case of air failure due to disconnection or damage to the air hose. A safety key way in the ram checks the head from turning and shifting the load. Ball bearing thrusts and radial mountings further assure long life and operation ease. A Y-connection between jacks enables one man to operate two jacks simultaneously. Additional details may be secured from —DUFF-NORTON MFG. CO., 2709 PREBLE AVE., PITTSBURGH 30, PA.

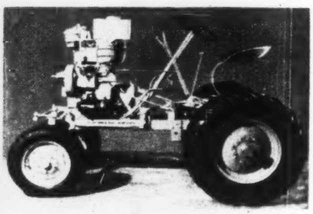
Paint for Quonset Huts

A paint is now available for use on galvanized metal surfaces, such as those of Quonset and other steel buildings, which normally require a weathering or chemical treatment before a successful bond can be obtained. The Quon-Kote paint is specially compounded with a linseed oil base to react chemically with the zinc on new galvanized surfaces to form a tightly bonded protective coat without a primer. It is made by the Sherwin-Williams Co. for the Great Lakes Steel Corp., manufacturers of the Quonset huts, and is available in five colors—white, cream, red, green and gray—which can be intermixed for various shades.—GREAT LAKES STEEL CORP., STRAN-STEEL DIVISION, 3750 PENOBSCOT BLDG., DETROIT 26, MICH.



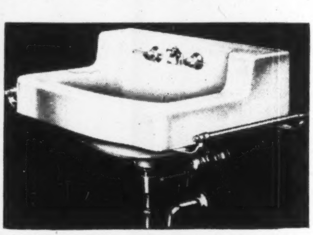
Rotary Tiller for Road Work

A rotary tiller, of Swiss manufacture, has been introduced in the United States. It has several applications in roadside-development operations, soil-stabilization work and similar uses. The Grunder-Swisstiller is powered by a 1-cylinder 8-hp. engine. Cooling of the engine is effected by means of a turboblower located at the front of the machine. Either gasoline or kerosene can be used as fuel. The transmission provides for three speeds forward and one reverse. The tiller has provisions for two speeds. A simple single-wheel declutching has been incorporated which facilitates making turns. All of the controls are located at the handlebars. Several attachments are available including sickle bar, front mowing attachment, plow and power takeoff. Maximum tilling width is 35 in. Similar tillers can be had in 30, 20 and 16 in. widths. The power unit and transmission are the same for all tilling machines.—GENERAL DISTRIBUTOR IS LEE HYDRAULIC CO., P. O. BOX 804, TROY, N. Y.



Diesel-Powered Tractor

Marked operating economy and rugged construction are outstanding features of the new, highly maneuverable Sheppard diesel industrial tractor. It is good for heavy-duty hauling where there are inclines and uneven or muddy surfaces. Attachments quickly convert it to equipment for stock piling loose materials and for yard maintenance, including snow removal, moving or light grading. Low-cost power is provided by its easy-starting one-cylinder air-cooled Sheppard diesel engine which develops 5.4 hp. at 2000 rpm. It operates at full load for 3 hr. on a single gallon of No. 2, 3, or 4 furnace oil. With an overall length of 7 ft., and a 4 ft. 6 in. width, it turns easily within a radius of less than 10 ft. Because of its non-explosive fuel and absence of electrical ignition, it is recommended for use where a fire hazard exists.—R. H. SHEPPARD CO., HANOVER, PA.



Vitreous China Lavatories

A new line of vitreous china lavatories in thirteen models comprises a series of five units. Three of these new units are furnished with a shelf having

This *extra* service cuts down costly accidents . . . and speeds construction at the same time . . .

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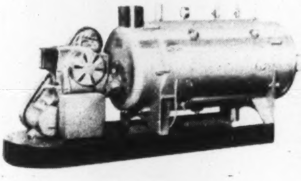
a beaded edge designed for non-soiling and the other two with a convenient ledge on which the supply fitting is mounted. Each lavatory has a dual front overflow which has the added advantage of a smooth under bowl front—no bulge. Extra room is provided in the back for connecting the hot and cold water supply. No-slip, hexagonal towel bars attach to the lavatory at front and back, avoiding breaking of tile or marring plastered walls. — Briggs Mfg. Co., Detroit 11, Mich.



Hot Water Heating Boiler

A new hot water heating boiler for panel, gravity, or forced feed hot water applications is offered. It is available in three sizes, 250,000 B.t.u. output (8 h.p.), 550,000 B.t.u. output (16 h.p.), and 730,000 B.t.u. output (22 h.p.). Units are completely automatic and fired by oil or gas. The large unit is 113 in. long, 44 in. high and 26½ in. wide. The front end of the base, including the burner, can be removed easily for separate handling where required. All units are constructed in accordance with the A.S.M.E. Code — Cleaver Brooks Co., 389 East Keefe Ave., Milwaukee 12, Wis.

High Pressure Lubricator

The design employed in the E-Z Greaser is said to make charging an easy operation and to increase the quantity of grease expelled per operation. It is equipped with an open well to hold the grease gun when not in use. This prevents the possibility of clogging the nozzle fitting. A special push-squeeze handle enables the operator to develop pressure up to 7,500 lb. without air or electricity. Ten feet of hose facilitates rapid servicing of hard-to-reach fittings without moving the lubricator. The E-Z Greaser fits any standard 25 to 40-lb. original container. It is quickly installed by means of three thumb-type set screws. Another outstanding feature is the follower plate which helps prevent channeling and pocketing of grease in colder temperatures.—K-P Mfg. Co., Minneapolis, Minn.

Chassis for Truck Mixers

This line of truck mixers and agitators is comprised of four models, one for each size mixer. Advantages include exceptional tractive effort; cab-over-engine design; heavy-duty construction; ample highway speed; and easy access to auxiliary engine. — Available Truck Co., 2501 Elston Ave., Chicago 47, Ill.

New Radiant Fluorescent

Guthlite, Jr., offers a new outstanding appearance, unusual lighting effect and fine lighting performance. When illuminated, side and spill lighting give it a radiant glow. This luminous effect is accomplished without glass or plastic panels, so there is no breakage or warpage. Diffuse aluminum louvres provide comfortable shielding and a low brightness at normal angle of view. It features a simple, easy-to-open hinge so that louvres may be hinged to either side, or completely removed for easy lamp and starter changes.—The Edwin F. Guth Co., St. Louis 3, Mo.

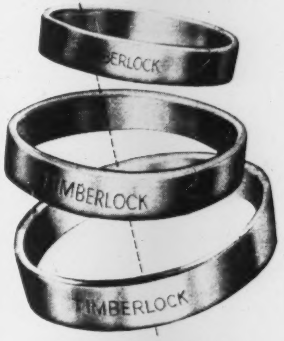
Automatic Line Oiler

A new line oiler that protects against running rock drills or other air-actuated equipment without adequate lubrication has been announced. Known as the L012 Automatic Line Oiler, this device shuts off the line air automatically when all the oil in the reservoir has been used. The manufacturer reports that special construction makes it impossible for oil in the chamber to become emulsified and mixed with water. Easy to service, since all parts may be withdrawn by hand, once the bushing on the inlet end has been removed.—Gardner-Denver Co., Quincy, Ill.

TIMBERLOCK

Split-Ring

TIMBER CONNECTORS



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STRENGTH
DEPENDABILITY
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EN-1

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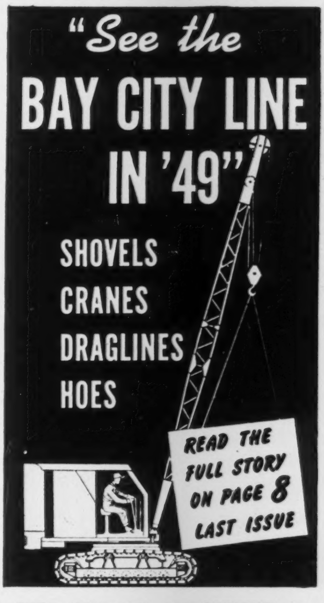
BAY CITY LINE
IN '49"

SHOVELS
CRANES
DRAGLINES
HOES



READ THE
FULL STORY
ON PAGE 8
LAST ISSUE

BAY CITY

BAY CITY SHOVELS, INC., BAY CITY, MICH.

CONSTRUCTION REPORTS

Bids Asked—Low Bidders—Contracts Awarded—First Section

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

ELSIE EAVES, Manager *J. A. MAHONEY, Reports* *M. R. ROESSLER, Statistics*

WATER SUPPLY

BIDS ASKED

July 7

La., Clinton—Town, Town Hall, WW imprvs. Plans deposit $20. E. G. Blakewood Jr., and R. D. Percy, 842 Geranium Rd., Baton Rouge, engrs. CD 3/4.

N. D., Carrington—City, elevated water tank, pumps and pump house. $50,000. Lium & Burdick, Grand Forks, engrs.

July 12

Pa., Beaver — Beaver Boro, Boro Hall, Contr. A, 1 story, 30x36 ft., brick and block pump house, Contr. B, deep well turbines; Contr. C, water softeners bldg.; Contr. D, electrical. $800,000. Michael Baker, Jr., Rochester, engr.

July 13

N. D., Bowbells—City, WW repairs, extens. $35,000 Dakota Eng. & Constr. Co., Valley City, engr.

July 15

O., Marietta—Lowell Russell City Service Dir., Marietta, WW plant. Plans deposit $10. Extended date. Alden E. Stilson & Assoc., 209 S. High St., Columbus, engrs. CD 6/7.

LOW BIDDERS

Calif., Oakland—East Bay Municipal Utility Dist., 516 12 St., June 8, installing 6,000 lin. ft. 2-to 8-in. c.i. watermains, Contra Costa Co. and 10,000 lin. ft. 2-to 8-in. watermains, in Alameda Co., Spec. Ls-470, from Underground Constr. Co., 75 Ave. and San Leandro Blvd., **$63,811.**

CONTRACTS AWARDED

Calif., Monterey Park—City, 320 W. Nemark Ave., concrete water storage reservoir, to Mac Isaace & Menke, 3440 E. 22 St., Los Angeles, **$43,415.** Bids 6/13, awarded 6/31. CD 5/10—ENR 5/12.

Calif., Ventura—City, two 60 ft. diam., 18 ft. deep steel tanks, to Pittsburgh-Des Moines Steel Co., 408 S. Spring St., Los Angeles, **$28,170.** Awarded 6/13. CD 4/8.

Ill., Anna—State Welfare Dpt., Springfield, water filtration plant imprvs., Anna State Hospital, to Caldwell Eng. Co., Jacksonville, **$44,250.** CD 5/17.

N. D., Jamestown—City, WW sys., to Lindberg Constr. Co., Jamestown, **$321,082.** Bids 6/6. CD 5/25.

S. C., Spartanburg—City, filtration plant addn., to Fiske-Carter Constr. Co., Spartanburg, **$150,410.** Bids 6/15. CD 5/25.

Tex., San Antonio—Delavan Realty Co., 3302 W. Woodlawn St., waterlines, own forces. **$30,000.** Roy Baines, c/o owner, engr.

Tex., San Antonio—Albert Hirshfield, Milam Bldg. and Wm. Ochse & Assoc., Alamo Natl. Bldg., water lines, own forces. **$35,000.** J. W. Beretta Engineers, Travis Bldg., engrs.

SEWERS, WASTE DISPOSAL

BIDS ASKED

July

O., Euclid—City, 585 E. 222 St., storm and sanitary sewers E. 260 St. from Euclid Ave. to Lakeland Blvd. $150,000. Bids 6/3 rejected LB. **$140,009** concrete pipe; **$150,868** vitr. pipe. CD 6/13—under LB.

LOW BIDDERS

Calif., Los Angeles—City, Bd. P. Wks., 153 City Hall, June 15, sanitary sewers De Soto Ave. and Sherman Way Sewer Dist., from Matt J. Zaich Co., 6828 Farmdale St., **$217,064** est. $195,525***sanitary sewers and street imprvs., Oxnard St. and Colfax Ave. Sewer Dist., from Northwest Excav. & Grading Co., 1154 E. Colorado Ave., Pasadena, **$177,859,** est. $174,277*** sanitary sewers Owensmouth Ave. and Hart St. Sewer Dist., from V C K Constr. Co. 629 S. Atlantic Pl., **$194,048,** est. $184,908. CD 5/24.

♦Ia., Council Bluffs—U. S. Eng., 1709 Jackson St., Omaha, Neb., June 15, pumping stations, sewer alterations, Unit III Sect. 2, Serial No. Eng. 25-066-49-218 from Parsons Constr. Co., Grain Exchange, Omaha, Neb., **$277,314.** CD 5/17.

CONTRACTS AWARDED

Calif., Los Angeles—City, Bd. P. Wks., 153 City Hall, Valley Dist. refuse collection yard, to Ray V. Anderson, 5742 Venice Blvd., **$237,775.** Bids 6/15. S. B. Barnes, 803 W. 4 St., engr.

Ill., Sullivan—City, City Hall, 31,000 ft. 12 to 42 in. storm sewers, to A. & E. General Contg. Co., 5909 W. Quincy St., Chicago, Zone 44, **$190,000.** T. M. Harvey, Paris, engr. CD 7/27/45.

O., Cleveland—City, City Hall, storm and sanitary sewer and outlet in E. 173 St. from Lipton to Southerly end, to National Constr. Co., 23500 Lakeland Ave., Euclid, **$106,918.** Bids 6/9, awarded 6/15.

Tex., San Antonio—Delavan Realty Co., 3302 W. Woodlawn St., sanitary sewers, own forces. **$55,000.** Roy Baines, c/o owner, engr.

Tex., San Antonio—Albert Hirschfield, Milam Bldg., and Wm. Ochse & Assoc., Alamo Natl. Bldg., sanitary sewers, own forces. **$50,000.** J. W. Beretta Engineers, Travis Bldg., engrs.

BRIDGES

BIDS ASKED

July 12

Fla., Miami—Bd. Comrs. Dade Co., Miami, Palmer Lake Bridge at N. W. South River Dr.; Little River Canal Bridge at N. W. 103 St. Plans deposit $15 each. CD 11/9/44.

LOW BIDDERS

N. Y., New York — President Manhattan Boro, Municipal Boro, Zone 7, June 20, Contr. 336, repairing drainage sys., railings, sidewalks, W. 115 St. Viaduct, between Harlem River Dr. and Macomb Pl., from Edgecliff Constr. Co., 34-60 32 St., Long Island City, **$117,146.** CD 6/13, under Earthwork, Waterways.

CONTRACTS AWARDED

California—State Div. Hys., Los Angeles, deck plate girder bridge, reconstructing existing plate girder bridge, grading, paving approaches 0.5 mi. with b. conc. on aggregate base and existing pavement across San Gabriel River on Valley Blvd., Los Angeles Co., to W. J. Distell, 4814 W. Jefferson Blvd., Los Angeles, **$604,206.** Bids 5/26. CD 5/5

Connecticut — State, G. Albert Hill, hy comr., Hartford, twin 6x6 ft. rein.-con. box culvert 1,337 lin. ft. long harbor front relocation of U. S. Route 1, to C. W. Blakeslee & Sons, Inc., 58 Waverly St., New Haven, **$504,265.** CD 6/9, under LB.

Tex., Beaumont—Beaumont, Sour Lake & Western R. R., c/o Gulf Coast Lines, C. S. Kirkpatrick, ch. engr., Union Station, Houston, underpass, force account. **$115,000.** CD 6/21.

STREETS AND ROADS

LOW BIDDERS

Ala., Mobile—Mobile Co., Bd. Rds., Revenue, June 9, road imprvs., Imprv. Proj. 4, from Dunn Constr. Co., First Natl. Bldg., Birmingham, **$61,736*****Imprvt. Proj. 28, from L. L. Jarrell, Whistler, Mobile, **$74,937*****Imprvt. Proj. 83, from J. S. Walton, First Natl. Bank Bldg., Mobile, **$134,167*****Imprvt. Proj. 5, from Harbert & Cargile, Monroe Park, Mobile, **$194,082.** CD 5/10.

Florida—State Rd. Dpt., Jacksonville, June 16, Miami rock base, bit and b. conc. (Type II), 40079 mi. Rd. 809, between Lake Worth Rd. and Rd. 80, S. P. Job 9375-112, Palm Beach Co., from R. H. Wright & Son, Ft. Lauderdale, **$120,970*****sand bit. road mix 2 concrete slab bridges on treated timber piling 7.042 mi. drainage structures, etc. State Rd. 82 between Hendry Co. line and State Rd. 29, Job 0305-21, F.A.S.P. S-266 (1), Collier Co., from Brinson Constr. Co., 51 St. and E. Broadway Ave., Tampa, **$183,077*****grading, stabilizing, small drainage structure, bit. road mix one 375.5 ft. concrete deck steel I-beam bridge on concrete caps and concrete piling 6.902 mi. State Rd. 73 between point approx. 6.6 mi. west of Arcadia and Arcadia, Job 0406-201, F.A.S.P. S-5 (2), DeSoto Co., from L. L. Hall Constr. Co., Orange Park, **$204,594.** CD 6/6.

PROJECTS COVERED

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterways $28,000; other public works $50,000; industrial buildings $68,000; other buildings $250,000.

Classes of Construction

(Name in order of Listing)

Water Supply
Sewers, Waste Disposal
Bridges
Streets & Roads
Earthwork, Waterways
Latin America
Public Buildings
Commercial Buildings
Industrial Buildings
Unclassified

Stages Reported

PROPOSED WORK: **Including appointment of engineers or architects.**

BIDS ASKED **(new announcements only). For full calendar, see also preceding issues of ENR.;**

LOW BIDDERS: **On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.**

CONTRACTS AWARDED: **Except awards to low bidders previously reported in low bidder stage.**

Dates shown are of issue in which last previous report was published.

Symbols and Abbreviations Include:

♦ Federal Government
● Project of $1,000,000 or over.
ENR Engineering News-Record
CD Engineering News-Record Construction Daily

Maine—State Hy. Dpt. Augusta, June 15, bit. 1.755 mi. Bar Harbor, F. A. Proj. S 68 (1), from A. P. Wyman, Inc., Waterville, **$173,697.** CD 6/8.

N. C., Durham—City, R. W. Flack, mgr., June 14, grading, paving streets, curbs, gutters driveways, from J. P. McGuire Constr. Co., Durham, **$693,803.** CD 6/8.

●Tennessee—State Hy. Dpt., Nashville, June 17, from Wesco Paving Co., Volunteer Bldg., Chattanooga, wid'n, bit. rsurf. 23 mi. State Route 9, La Follette to Jellico, Campbell Co., **$551,533;** wid'n resurf. 3 mi. State Route 2 on Brainerd Rd. in Chattanooga from east portal of McCallie Ave., tunnel through Missionary Ridge to east city limits and bit. resurf. State Route 2 from east city limits to bridge over Chickamauga Creek, Hamilton Co., **$133,293*****from R. B. Tyler Co., 1446 Levering St., Louisville, Ky., bit. road mix surf. and seal coat 12.3 mi. Secondary Routes 2419, 2421 and 2422 near Sevierville, Sevier Co., **$53,187;** bit. seal coat 13 mi. Secondary Routes 2393, 2394 and 2438 around Sunbright Morgan Co., **$131,010*****from Sam Finley, Inc., 292 North Ave. N. W. Atlanta, Ga., wid'n bit. resurf. 6.2 mi. State Route 29 from Hamilton Co. line to Dayton, Rhea Co. **$231,403*****from Pullen & Owens, 3rd Natl. Bank Bldg., Nashville, crushed stone surf. 6.3 mi. Secondary Route 6115 from State Route 49 at Erin north to Cumberland City, Houston and Stewart Counties, **$101,108;** crushed stone surf., 2 bridges, 5.2 mi. Secondary Route 5235 from Byrdstown to Moodyville, Pickett Co., **$65,000,** crushed stone or gravel base 12.8 mi. Rural Road 4234, 5044 and 5045, **$69,996*****from A. B. Long, Harriman, bit. mix surf. 6.9 mi. Secondary Route 2442 from Winton Rd. north to Rockwood, Roane Co., **$69,774;** crushed stone surf. 9 mi. Secondary Route 4268 from State No. 30 at Washington northeast to State Route 68, Rhea Co., **$51,571*****from J. B. Michael Co., 1021 Heywood St., Memphis, bit. surf. tr. 13 mi. Rural Route 9013 from Humboldt via Gibson wells to Brazil, Gibson Co. **$86,121,** wid'n crushed stone resurf. 1.8 mi. State Route 5 from intersection of Central and Main Sts. in Humboldt toward Jackson, Gibson Co., **$104,619;** gravel surf. 4.1 mi. State Route 50 from east of Swan Creek west to Wille Branch, Hickman Co., **$117,927,** wid'n bit. resurf. 12.5 mi. State Route 5 from Mississippi line to State Route 15 at Selma, McNairy Co. **$478,596;** grading, drainage, incl. 5 bridges 2.4 mi. State Route 1 from Bruceton east to Sawyers Mill, Carroll and Benton Counties, **$279,640*****from Anderson-Gregory Co., Maxwell House, Nashville, crushed stone surf. 7.1 mi. Secondary Route 6123 from point near Davidson Co. line to Springfield, Robertson Co., **$67,374*****from Roberts Co., 1560 Waverly Ave., Memphis, bit. surf. 4.9 mi. Secondary Route 8098 from State Route 14 at Raleigh through Bartlett to junction of State Routes 1 and 15, Shelby Co., **$73,975*****from R. E. Martin, 317 5 Ave. S., Nashville, grav. surf. 2 bridges, 3.6 Secondary Route 6217 from State Route 53 at Gainesboro to State Route 85 at Rough Point, Jackson Co., **$127,989*****from Malone Bros., Greeneville, crushed stone surf. 15.7 mi. Secondary Route 2371 from Baileyton to 0.4 mi. of Washington-Sullivan Co. line, Washington, Greene and Sullivan Counties, **$232,488*****from Hobert Greene Constr. Co., Harriman, bit. road mix surf. and seal coat 10.8 mi. Secondary Route 2355 and 2357, near Dandrige, Jefferson Co., **$54,989*****from J. M. Hickman, Harriman, crushed stone base, bit. surf. 3 bridges, 2.5 mi. Secondary Route 4368 from State Route 60 west of Cleveland to Prospect, Bradley Co., **$125,778*****from C. A. Thompson, Centerville, crushed stone surf. incl. 3 bridges 4.5 mi. State Route 28 from State Route 8, 1 mi. south of Sequatchie River to about ¼ mi. north of Dunlap, Sequatchie Co., **$308,634*****from R. G. Young & Sons, Johnson City, crushed stone surf. 3.5 mi. State Route 33 from point 2 mi. west of new Tazewell to Tazewell, Clairborne Co., **$181,956***** from McDowell & McDowell, 4805 Wyoming Ave., Nashville, crushed stone surf. incl. bridge 6.1 mi. Secondary Route 6138 from State Route 95 east of Franklin to Rudderville,

(Continued on page 38)

Operating AMERICAN LOCOMOTIVE CRANES is a Soft Touch

through W·A·B Engin*air*ed Devices

It's sad but true that the harder a crane *operator* has to work—the more his *equipment* will loaf!

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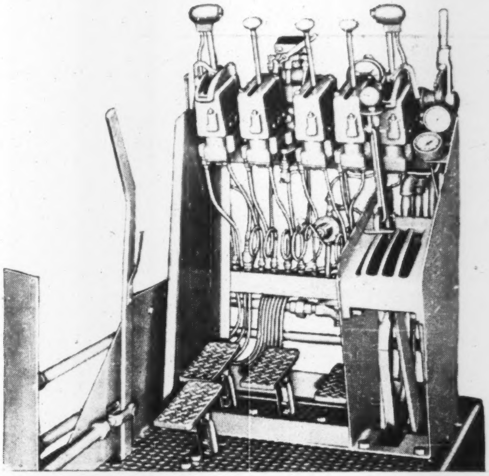

Westinghouse Air Brake Company

Industrial Division, WILMERDING, PA.

(Continued from page 36)

Williamson Co., **$88,975*****from Ellis & Olsen, Nashville, wid'n to 4 lanes and bit. resurf. 11.3 mi. State Route 11 from Nashville to State Route 41, Davidson and Summer Counties, **$897,567*****from Gatlinburg Constr. Co., Gatlinburg, c. conc., 0.4 mi. State Route 71 in Gatlinburg, **$190,989.** CD 5/36.

Texas—State Hy. Dpt., Austin, cancelled bids to have been opened June 21, grading, structures 3.871 mi. Hy. U. S. 67 from 0.25 mi. north of Midlothian to Dallas Co. line, Control No. 261-1-8, F. P. No. F 592 (13). CD 5/27.

CONTRACTS AWARDED

Ala., Montgomery — City, paving various streets, to Hodgson Contg. Co., 732 Monroe St., **$152,627.** Bids 6/14.

Ia., Pocahontas—Pocahontas Co., Pocahontas, surf. roads, to Perry Constr. Co., Perry, **$58,110.** Bids 6 6.

Maine—State Hy. Dpt., Augusta, b. conc. 5.5 mi. Brunswick-Topsham-Bowdoin, Betterment Proj. 443, C. Q. Q-1, to Warren Bros. Roads Co., Cambridge, Mass., **$54,299.** Bids 6/15. CD 6/8.

Minnesota—State Hy. Dpt., St. Paul, bit. seal coats 178 mi. Maintenance Dists. 3, 4, 6, 7, 9, 11 and 13, to J. W. Craig Co., 1814 N. E. California St., Minneapolis, **$66,377;** bit. surf. road mix, 21 mi. Maintenance Dist. 8, to Barton Constr. Co. 1463 Marshall Ave., St. Paul **$68,933.** Bids 6/10. CD 5 26.

Nebraska—State Dpt. Roads & Irrigation, Lincoln, grading 66.9 mi., culverts and one 29 ft. and two 21 ft. span concrete slab bridge station 105 plus 90 and one 48 ft. and two 35 ft. span concrete slab bridge, Station 318 plus 75, FAS 378, Johnson South, to Monarch Eng. Co., Falls City, **$51,903.** Bids 5/26. CD 5 19.

O., Cleveland—City, City Hall, Lakeside Ave. and E. 6 St., paving and imprv. Montrose Ave. from W. 159 St. to Warren Rd. to Velotta Constr. Co., 4614 Prospect Ave., **$91,286.** Awarded 6/6.

Tex., Columbus—Colorado Co., Courthouse, Columbus, all-weather road constr. Precinct, 2, **$75,000;** Precinct 5, **$90,000,** force account. CD 7/22/47.

Tex., Conroe—Montgomery Co., c/o Robert H. Weatherly, Courthouse, Conroe, road imprvs., grading, surf., force account. **$145,000.** Claude H. Lindsley, 2314 McGregor Way, Houston, engr. CD 2 23.

Tex., San Antonio—Delavan Realty Co., 3302 W. Woodlawn St., construct and paving streets, own forces. **$70,000.** Roy Baines, c/o owner, engr.

Tex., San Antonio—Albert Hirschfield, Milam Bldg., and Wm. Ochse & Assoc., Alamo Natl. Bldg., construct and paving streets, asph. type, own forces. **$75,000.** J. W. Beretta Engineers, Travis Bldg., engrs.

Washington—State Hy. Dpt., Olympia, b. conc. 3.24 mi. Primary State Hy. 9, Gibson Creek to Malone, Grays Harbor Co., to J. F. Forbes, Olympia, **$54,039*****non-skid seal and bit. 87.58 mi. State Hys. 9 and 9-C, Montesano to junction with Primary State Hy. 13, Grays Harbor and Jefferson Counties, to Diesel Oil Sales Co., 2155 Northlake Ave., Seattle, Zone 3, **$95,617** **stockpiling, surf. and bit. macad. 10.935 mi. Primary State Hy. 8, Prindle to North Bonneville, Skamania Co., to Smith Bros., Vancouver, **$302,241.** Grand total $451,897. Bids 6/17, awarded 6/17. CD 6/3.

Ont., Mille Roches — Cornwall Twp. Mille Roches, permanent paving, to Dibblee Constr. Co. Ltd., 248 Albert St., Ottawa, **$107,954.** CD 5/7/47.

Ont., Oshawa—Municipality, concrete sidewalks, to Curran & Briggs Ltd., 7 Simcoe St., Approx. **$50,817.** W. T. Dempsey, city engr.

Que., Quebec City—Municipality, exten. St. Cyrille St. between Symard and Madeline de Vercheres, street opening between Napoleon St. and Charest Blvd., own forces, **$51,300.** Ed Hamel, city engr.

EARTHWORK, WATERWAYS

BIDS ASKED

July 21

†Texas—U. S. Eng., 606 Santa Fe Bldg., Galveston, reservoir clearing, Second Contract Dam B, Neches River Basin, Neches River, Inv. No. Eng-41-243-49-347.

July 26

†South Dakota—Bureau Reclamation, Dpt. Interior, Bldg. 1-A, Denver Federal Center, Denver, Colo., furnishing, del. f.o.b. cars shipping point or f.o.b. cars Oral, 5 gate hoist control boards for Angostura Dam, Angostura Unit, Missouri River Basin Proj., Spec. 2716.

LOW BIDDERS

†Arkansas—U. S. Eng., 300 Broadway, Little Rock, cancelled bids to have been opened June 20, emergency lavee repair Crawford County Levee Dist., Crawford Co., Serial No. Eng-03-050-49-75. CD 6/15.

†Arkansas—U. S. Eng., 300 Broadway, Little Rock, levee embankments, Serial No. Eng-03-050-49-68, Lot 1, from W. D. Jeffery Constr. Co., 4201 Towson St., F. Smith, **$193,787,** est. $211,934***Lot 2, from Claud Leigh, Morrilton, **$119,571,** est. $132,499***Lot 3, from S. J. Cohen, Blytheville, **$142,246,** est. $161,129. CD 5/25.

†Kansas—U. S. Eng., 601 Davidson Bldg., Kansas City, 8, Mo., cancelled bids to have been opened June 21, levee construction, Unit 482-R, on right bank of Missouri River, from approx. mile 476.4 to approx. mile 485.9, Doniphan Co., Serial No. Eng. 23-028-49-219. CD 6 1.

†Louisiana—U. S. Eng., foot Prytania St., New Orleans, June 15, snagging, clearing approx. 1.1 mi. excav. approx. 4,800,000 cu. yd. material along Bayou Lafourche, from Atlas Constr. Co., Waxahachie, Tex., **$554,680.** CD 6/2.

†Nebraska—U. S. Eng., 601 Davidson Bldg., Kansas City 8, Mo., cancelled bids to have been opened June 24, levee and channel cut-offs, Bartley, Serial No. Eng-23-028-49-182. CD 6/6.

CONTRACTS AWARDED

●†Oklahoma—U. S. Eng., P. O. Box 61, Tulsa, clearing Fort Gibson reservoir area, Eng-34-066-49-96, to Benson Excavating Co., 406 Hammond St., San Antonio, Tex., **$974,777.** Bids 6/15, awarded 6/17.

Tex., San Antonio—Delavan Realty Co., 3302 W. Woodlawn St., drainage ditching, grading site levelling, own forces. **$30,000.**

Tex., San Antonio—Albert Hirschfield, Milam Bldg. and Wm. Ochse & Assoc., Alamo Natl. Bldg., site grading, levelling, open drainage, own forces. **$30,000.** J. W. Beretta Engineers, Travis Bldg., engrs.

AIRPORTS AND AIRBASES

BIDS ASKED

July 1

Okla., Bartlesville—AIRPORT IMPRVS.—City, c. conc. waterlines, sewage disposal sys. and drainage at municipal airport. $90,000. Plans deposit $25. Ross Taylor, Bartlesville, engr. CD 12/17/47.

LOW BIDDERS

†Calif., Point Mugu — BARRACKS, etc. — U. S. Navy Air Missile Center, June 14, barracks, mess hall, power house roadway, water sys., sewerage sys., pier landing ramps, etc., Santa Cruz Island, from Edward R. Siple Co., 2545 San Fernando Rd., Los Angeles, **$421,844.** CD 6/1.

†Fla., Tampa—FAMILY QUARTERS—U. S. Eng., Post Office Bldg., Savannah, Ga., June 16, family quarters 30 and 50 units, at MacDill Air Force Base, Serial No. Eng.-09-133-49-188, from Henry A. Ives, Inc. 569 Plum St. N. W., Atlanta, Ga., **$316,350** and **$521,878** respectively. CD 6/1.

†Fla., Tampa—OUTSIDE UTILITIES—U. S. Eng., Post Office Bldg., Savannah, Ga., June 16, outside utilities for family quarters at MacDill Air Force Base, Serial No. Eng.-09-133-49-192, from C. F. Dawkins, 420 S. Rome Ave., **$94,744.** CD 6/3.

†Pa., Johnsonville — STATION — Pub. Wks. Office, Phila. Naval Base, Phila., June 15, Naval Air Development Station replacement exten., Spec. 22221, from Nicholas Di Tommasco Co., 542 E. Haines St., Phila., **$206,558.** CD 6/3.

†Tex., Fort Worth—HOUSING, etc.—U. S. Eng., 606 Santa Fe Bldg., Galveston, June 17, 88 family type housing units, Carswell Air Force Base from McCann Constr. Co., P. O. Box 2079, **$877,052;** utilities, incl. water, sewer, gas, lighting, grading, from J. W. Bateson Co., Irwin-Keasler Bldg., Dallas, **$75,247.** CD 5/25.

†Tex., Randolph Field—UTILITIES—U. S. Eng., 606 Santa Fe Bldg., Galveston, June 15, c.i. waterlines, facilities and sanitary sewers, gas line, Inv. No. Eng.-41-243-49-296, from C. L. Browning, Jr., 812 Insurance Bldg., San Antonio **$29,971,** est. $45,000 and **$60,029,** est. $60,000 respectively. CD 5/18.

CONTRACTS AWARDED

Conn., Windsor Locks—AIRPORT IMPRVS.—State, G. Albert Hill, hy. comr., State Office Bldg., Hartford, airport imprvs., incl. installing high tensity lights, Runway 6-24, to Bauer & Co., 844 Windsor St., Hartford, **$51,357;** sealing runways and taxiways, and reconstructing main apron Proj. B A-CC-39, Bradley Field International Airport, to E. B. McGurk, Inc., 355 Barbour St., Hartford, **$180,449.** Bids 6/13. CD 5/26.

Okla., Lawton—ADMINISTRATION BLDG.—City, airport administration bldg., to W. C. Shelton, Lawton, **$124,429.** Est. $130,000. Awarded 6/14. CD 5/31.

PUBLIC BUILDINGS

BIDS ASKED

July 12

Kan., Manhattan — State Bd. Regents, Topeka, womens dormitory at Kansas State College, $300,000. Charles Marshall, Topeka, state archt. CD 5/26.

July 13

●N. Y., Syracuse—R. W. Sollinger, purch. agt. Onondaga Co., Courthouse, general constr. with arch-rib concrete roof structure, plumbing, heating, ventilation, refrigeration, and rink piping, electrical for Onondaga County War Memorial Auditorium $3,500,000. Plans deposit $50. Edgarton & Egarton, 401 Herald Place, archts. CD 5/19. Extended date.

July 14

O., Painesville—Bd. Educ., 167 W. Washington St., nursery school addn. $260,000. Plans deposit $15. Harry Fulton, 6014 Euclid Ave., Cleveland, archt. CD 5/5.

July 21

●N. Y., Mount Vernon—Bd. Educ., 4 Ave. and E. 4 St., school, $1,100,000. Plans deposit $50. Warren S. Holmes Co., 2300 Tower Bldg., Lansing, Mich. and Emilio Di Rienzo, 57 Gramastan Ave., archts. CD 10/23/47.

July 27

Que., Montreal—Executive Com., City Hall, library, hygiene centre, bathhouse, Rosemount Blvd., for Municipality, $800,000. Plans deposit $100, J. J. Perrequet, 3737 Van Horne Ave., archts. Kearne & Bromley, 1414 Drummond St., engrs.

LOW BIDDERS

●Ala., Decatur—City, Bd. Educ., June 16, Junior-Senior High School, from Forcum-James Co., 1489 Thomas St., Memphis, Tenn., **$1,058,547;** elementary school, from F. N. Thompson Co., Atlanta, Ga., **$264,000.** CD 5/26.

Calif., Los Angeles—Bd. Educ., 1425 S. San Pedro St., June 14, 27 unit valley group of bungalows, from Mead & O'Donnell, 7769 Melrose Ave., **$268,687.** A. S. Nibecker, 1425 S. San Pedro St., archt.

Colo., Greeley—Weld Co., Public Hospital Assoc., L. P. McArthur, Bldg. Bd. Chn., general contract, 5 story, bsmnt., brick 200 bed hospital addn., from Newstrom-Davis & Co., 2000 W. 8 Ave., Denver, **$269,600.** CD 4/24/45.

Ia., Ames—City, City Hall, June 6, power sys. imprvs., Contr. 20, power piping, from Moffett & Troup, Inc., 4 Smithfield St., Pittsburgh, Pa., **$185,564.** CD 5/25.

Kan., Larned—Community Hospital Comm., c/o St. Joseph Hospital, Larned, June 7, general contract St. Joseph Hospital bldg., from Busboom & Rauh, Salina, **$518,779.** CD 5/27.

La., Baton Rouge—East Baton Rouge Parish, Baton Rouge, June 15, Easy Town High School, from Caldwell & McCann, Triad Bldg., **$637,450.** CD 6/3.

La., Bogalusa—Div. Admin., 201 Capitol Annex, Baton Rouge, June 15, 2 story, brick, concrete, steel Washington-St. Tammany Charity Hospital, from Dye & Millings, P. O. Box 485, Columbia, Miss., **$741,988.** CD 5/17.

Minn., Worthington—City, G. S. Thompson, clk., City Hall, June 14, general contract municipal hospital, from Spencer Constr. Co., Spencer, Ia., **$422,988.** CD 5/25.

●†N. M., Albuquerque—U. S. Eng., Box 1538, June 15, two 2 story 70,600 sq. ft. machine shop, industrial type bldgs., Bldgs. A-23B and A-23C, Serial No. 291-49-95, from R. J. Daum Constr. Co., Aubuquerque, **$1,200,000.** CD 5/23.

†N. D., Minot—U. S. Eng., Administration Bldg., Fort Peck, Mont., received no bids June 8, nurses' quarters for John Moses Veterans Memorial Hospital, Serial No. Eng.24-016-49-69. CD 5/19.

●S. C., Spartanburg — Spartanburg General Hospital, c/o low bidder, June 9, hospital addn., from McKay-Werry Constr. Co., Spartanburg, **$1,072,000.** CD 5/24.

●Wis., Milwaukee — Housing Authority of City of Milwaukee, 844 N. Market St., Zone 2, June 16, Veterans Permanent Housing Proj. II, from Kroening Eng. Corp., 4500 W. Mitchell St., Zone 14, **$2,478,603.**

Wyo., Gillette—Bd. Educ., Gillette, June 2, high school addn., from Marx Luton & Assoc., Gillette, **$277,956.** C. W. Shaver, Sheridan, archt.

CONTRACTS AWARDED

●Calif., Los Angeles—Bd. Supervs. Los Angeles Co., 501 Hall of Records, psychopathic unit of General Hospital, to Stanton-Reed Co., 816 W. 5 St., Los Angeles, **$1,610,729.** Bids 7/7, awarded 6/14. CD 6/10, under LB.

Ind., Hammond—Bd. School Trustees, Hammond, general contract Porter School, to Leo Rueth & Sons, 1040 Cherry St., **$431,698.** Bids 6/14, awarded 6/16. CD 5/18.

Ind., Noblesville—Hamilton Co., Court House, general contract county hospital, to A. R. Hunnicut Co., P. O. Box 128, New Castle, **$472,322;** heating, ventilating and plumbing, to Acme Plumbing & Heating Co., Lafayette, **$263,000.** Bids 6/17. CD 6/3.

Ind., Terre Haute—Bd. Comrs. Vigo Co., Court House, general contract county home addns., alterations, to Glenn North Constr. Co., 9 and Tippecanoe Sts., **$298,811.** Bids 6/9. CD 5/12.

Kan., Chanute—Neosho Co., Chanute, general contract hospital, to Bowers Constr. Co., 220 Elmwood St., Topeka, **$265,693.** Bids 5/11. CD 5/20.

●Md., Bel Air—Harford Co. Bd. Educ., Bel Air, 250x500 ft., brick, concrete, steel North Harford School, near here, to The Davis Constr. Co., 320 W. 24 St., Baltimore, **$1,231,000.** Bids 5/11. CD 5/17.

Minn., Duluth—St. Louis Co., Court House, general contract infirmary, to J. D. Harrold Co., 405 E. Superior St., **$541,900.** Bids 6/1. CD 6/15, under LB.

N. Y., Binghamton—Binghamton Housing Auth., 777 O'Neil Bldg., Housing Proj. NYS-42, to Vincent J. Smith, Inc., 1 Endicott Ave., Johnson City, **$873,422.** Bids 5/5. CD 5/10, under LB.

†South Dakota—U. S. Eng., 1709 Jackson St., Omaha, Neb., housing facilities for Oahe Reservoir Proj., near Pierre, Inv. No. 25-066-49-233, to Tri-State Constr. Co., 1601 Geneva St., Sioux City, Ia., **$643,701.** Est. $843,633. Bids 5/20. CD 5/25, under LB.

Va., Danville—State, Richmond, motor vehicle storage bldg. for Virginia National Guard, to Conquest, Dunn & Potter, Inc., Charlottsville, **$74,354.** Bids 6/1.

Wash., Tacoma—School Dist. 1, Central School, general contract Jefferson School addn., to Nyanza Constr. Co., 6314 Avalon St., **$295,450.** Bids 6/8. CD 5/26.

●**Alaska, Anchorage**—School Bd., Anchorage, 3 schools, to Brady Constr. Co., 707 Spokane St., Seattle, Wash., and A. C. Swalling Co., Anchorage, **$1,381,020.** Bids 6/9. CD 6/15, under LB.

Ont., Stratford—Central Mortgage & Housing Corp., 295 Fleet St. W., Toronto, 51 houses, Stratford Proj. 4/49, to E. P. A. Construction, 69 Wilson Ave., London, Approx. **$357,000.** Bids 6/2. A. J. E. Smith, c/o owner, engr. CD 5/23.

Ont., Welland—Dpt. P. Wks., Hunter Bldg., Ottawa, post office alterations, addns., King St., to The R. Timms Constr. & Eng. Ltd., 221 Burgar St., Welland, Approx. **$266,000.** Bids 6/1. G. Brault, c/o owner, archt. CD 5/16.

COMMERCIAL BUILDINGS

SOON LETS CONTRACT

Ill., Chicago—Berghoff Restaurant, 19 W. Adams St., soon lets contract restaurant alterations, modernization. $250,000. M. Louis Kroman, 235 E. Ontario St., Zone 11, archt.

Ia., Waterloo—Scholtz Memorial Hospital, Waterloo, soon lets contract hospital. Skidmore, Owings & Merrill, 100 W. Monroe St., Chicago, Ill. CD 6/2.

Minn., Sauk Center—Franciscan Sisters of Immaculate Conception, Little Falls, soon lets contract 3 story, 24x44 ft. and 42x226 ft. St. Michaels Hospital. $700,000. F. W. Jackson, St. Cloud, archt. CD 5/18.

Pa., Drexel Hill—Holy Cross R. C. Church, c/o Henry D. Dagit & Sons, archt., 1329 Race St., Phila., soon lets contract church and school (1 bldg.). Approx. $250,000.

Pa., Elizabethtown—Masonic Home Com., Elizabethtown, soon lets contract nurses home. $300,000. Zantzinger & Borie, 1531 Chestnut St., Phila., archts. Moody & Hutchinson, 1420 Walnut St., Phila., engrs.

●**Pa., Lancaster**—Lancaster General Hospital, 528 N. Duke St., soon lets contract hospital addn., alterations. Approx. $2,500,000. James R. Edmunds, Jr., 505 Park Ave., Baltimore, Md., archt. Faisant & Kooken, 30 W. Hamilton St., 2017 Maryland Ave., Baltimore, Md., engrs. CD 5/9.

S. D., Watertown—Midland Natl. Life Insurance Co., Watertown, soon lets contract 3 story office. Extended date. K. M. Fullerton, Anchor Bldg., St. Paul, Minn., archt. CD 6/2.

●**Tex., Corpus Christi**—Orville W. Eastland, Jones Bldg., soon lets contract 35 stucco, steel type 4 to 6 unit apartments, concrete slab fdn., Claire Lane Gardens on Ayres St. $1,500,000. E. Dexter Hamon, Med. Professional Bldg., archt. F. T. Drought, 117 E. Pecan St., San Antonio, structural engr. B. L. Guess, Jr., 2424 S. Staples St., electrical engrs. H. Bartholomew & Assoc., 317 N. 11 St., St. Louis, Mo., and H. D. Thompson, 3216 Santa Fe St., landscape archts. CD 6/14.

LOW BIDDERS

La., New Orleans—N. V. Leveau, 3225 Ursuline Ave., June 8, 7 story, 81x92 ft., rein.-con., steel apartment, 3103 St. Charles Ave., from George J. Glover, Whitney Bank Bldg., **$895,960.** CD 5/10.

O., Lorain—St. Joseph's Hospital, Broadway and 21 St., June 14, general contract 100 bed hospital addn., from T. J. Hume Co., 435 Hamilton Ave., **$369,100.** CD 6/1.

Wis., Stevens Point—St. Stanislaus Catholic Congregation, 504 N. Fremont St., June 10, general contract 2 story, 62x200 ft., steel, brick school addn., from Hoffman Co., Inc., 1519 N. Oneida St., Appleton, **$389,000.** CD 5/25.

CONTRACTS AWARDED

Ill., Chicago—Catholic Bishop of Chicago, 719 N. Wabash St., Zone 10, home for aged, 3101 W. 15 Pl., to G. Kehl Sons, 1225 N. Maplewood St., Zone 22, Approx. **$250,000.** Eugene P. Reiner, 4954 W. Kamerling St., Zone 22, archt.

Ill., Chicago—Jewish Charities of Chicago, 231 S. Wells St., Zone 3, Rest Haven Convalescent Home, 1401 S. California St., to James Burton Co., Inc., 179 W. Washington St., **$550,000.** Awarded 5/15. Louis I. Simon, 179 W. Washington St., Zone 2, archt.

Ill., Chicago—Van Vlissingen Homes, Inc., 105 W. Monroe St., Zone 3, 45 houses, 9900 to 10156 Van Vlissingen Rd., to Manilow Constr. Co., 105 W. Monroe St., Zone 3, **$337,500.** C. J. Kastrup, 7346 Madison St., Forest Park, archt.

N. Y., Bayside—Floveland Realty Corp., G. C. Miller, archt., 67 W. 44 St., New York, Zone 18, 14 two-family houses, 196 Pl. and 69 Ave.; 12 two-family houses, 196 Pl. and 69 Ave.; 22 two-family houses 67 Ave between 197 St. and 196 Pl.; 22 two-family houses, 69 Ave. between 197 St. and 196 Pl. Owner builds, **$719,000.** CD 3/23.

N. Y., Bayside—Whitestone Estates, Inc., co A. H. Salkowitz, archt., 37-60 82 St., Jackson Heights, 65 one-family houses, 23

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and 26 Aves., 205, 206 and 207 Sts. Owner builds, **$390,000.** CD 4/27.

N. Y. Far Rockaway—W. F. Brumna, c/o Lederer & Joseph, archts., 66 Court St., Brooklyn, Zone 2, 47 one-family houses Beach 90 and Beach 89 Sts. and Beach Channel Dr. Owner builds, **$352,500.** CD 3/23.

●**O., Euclid**—Parkland Gardens, Inc., 765 Lakeview Ave., Cleveland, 54 apartments, Euclid Ave and E. 260 St., 23 bldgs. two story, bsmnt. and 31 three story bsmnt., brick, block and stone constr., separate contracts. **$5,000,000.** Weinberg Larue & Teare, 1227 Schofield Blvd., Cleveland, archts.

O., Parma—Dollar Constr. Co., 17003 Invermere St., Cleveland, fifty-six 1½ story, bsmnt., 26x28 ft. frame houses, Fernhill and Pinegrove Sts. Owner builds. **$532,000.**

O., Parma—Haislabauer Building Co., 6655 Broadview Rd., twenty-nine, 1½ story bsmnt., 26x29 ft., frame residences, 5228 and 5296 W. 52 St., separate contracts. **$261,000.**

O., Parma—Matherson Building Co., 14719 Puritas Rd., Cleveland, thirty-four 1½ story, bsmnt. residences, Russell Rd., spearate contracts. **$306,000.**

O., Parma—Renwick Constr. Co., 13494 Cedar Rd., Cleveland Heights, forty-three 1½ story, bsmnt., 27x29 ft. houses, Bradley and Laverne Sts., separate contracts. **$387,000.**

●**O., Parma**—Vincent Constr. Co., 3561 Ludgate Rd., Shaker Heights, four hundred 1½ story, bsmnt., 26x29 ft. brick houses, Whitting Rd. Owner builds. **$4,000,000.**

O., Shaker Heights—Radiant Home Builders, Inc., 1145 Sunset Dr., Mayfield Heights, 3 story apartment, 15715-15801 S. Moreland Blvd., separate contracts. Approx. **$250,000.** George Burrows, 1622 Lee Rd., Cleveland Heights, archt.

O., Wickliffe—Hubert Cornwell, 2022 Belle Ave., Lakewood, thirty-six 2 story, bsmnt., 28x38 ft. brick residences, E. 300 St. between Euclid Ave. and Ridge Rd., separate contracts. **$504,000.**

Okla., Tulsa—University of Tulsa, 600 S. College St., petroleum science bldg., to Tulsa Rig & Reel Co., Philtower Bldg., **$850,000.** Awarded 6/9. CD 9/22/48.

Ore., Portland—Ashbahr & Smith, Inc., 6345 N. E. 31 St., 4 story, 69 unit concrete wood frame apartment, N. W. 25 Pl., Lovejoy, 177 and 81 Sts., own forces. **$750,000.** Don Byers, Builders Exchange Bldg., archt. Pierson & Tidball, Concord Bldg., engrs. CD 9/28/45—ENR 10/11/45.

●**Pa., Montgomery**—Town & Country Builders, 6766 Blakemore St., Phila., 240 residences, separate contracts. **$2,000,000.**

R. I., Warwick—The Meadows, Inc., 551 Church Ave., Hoxsie, 40 six room 28x32 ft. frame homes, to A. F. Copper, 551 Church Ave., Hoxsie. Approx. **$380,000.** Philip Franklin Eddy, 93 Eddy St., Providence, archt.

●**S. C., Columbia**—Washington-Carver Village, c/o contractor, 346 unit apartment, to Congaree Constr. Co., Lykesland. Approx. **$1,800,000.**

Tex., Houston—Baytown-Magnolia Park Land Co., 2nd Natl. Bank Bldg., Houston, 3rd unit housing, on Marwood off Baytown Hy., own forces. **$275,000.** CD 11/16/48.

Tex., Houston—Bellfontaine Apartments, Inc., 3200 Gramercy St., 28 addnl. rental apartments units, off Gramercy St., own forces. **$265,000.** CD 6/17.

Tex., Houston—Bryker Woods Development Co., c/o M. W. Faner, 1846 Hollywood St., 20 dwellings. Owner builds. Approx. **$250,000.** CD 6/10.

Tex., Houston—United States Constr. Corp., c/o H. Zonana, 6835 A St., 82 dwellings, Yale St. Owner builds. **$850,000.** CD 6/10.

Tex., Houston—Paul H. Wolf Constr. Co., 6811 Kirby Dr., housing, Brae Burn Dr. Owner builds. **$275,000.** CD 6/10.

Tex., Pasadena—Deepwater Housing Co., c/o M. Krull, Pasadena, 18 addnl. dwellings, 1½ mi. [illegible] of here. Owner builds. Approx. **$325,000.** CD 6/10.

Tex., San Antonio—V. F. Buchek Co., Majestic Bldg., addnl. shopping center unit, west side Bandera Rd., own forces. **$250,000.** CD 6/3.

Tex., Weslaco—Dr. Charles Thornton & Assoc., Weslaco, 75 dwellings, own forces. Approx. **$460,000.** CD 6/10.

Wis., West Allis—Carmelite Sisters of the Divine Heart of Jesus of Milwaukee, 2377 S. 52 St., Zone 14, 3 story, bsmnt., Z-shaped 115x234 ft., rein.-con., steel, brick, tile Old Peoples Home addn., to E. Steigerwald & Sons, Inc., 5310 W. State St., Milwaukee, Zone 8. CD 6/15.

●**Que., Montreal East (Postal Dist. Montreal)**—S. D. Miller & Sons, 6999 Cote des Neiges Rd., Montreal, four hundred 1 story, bsmnt., 25x30 ft. dwellings, Sherbrooke St. E. Owner builds. **$2,500,000.** Eliasaph & Berkowitz, 1434 W. Ste. Catherine St., Montreal, engrs.

INDUSTRIAL BUILDINGS

BIDS ASKED

About July 5

Wis., Stevens Point—SERVICE—Wisconsin Public Service Corp., Wausau, 1 story, 80x140 ft., concrete block, steel service bldg., concrete fdn., floor. Foster & Yasko, 407 Scott St., archts.

Bids Asked

Md., Baltimore—PLANT—Southern Food Co., 579 Lloyd St., packing plant addns., alterations. Approx. $68,000. Morris Fruchtbaum, 328 Chestnut St., Phila., Pa., engr.

O., Ashtabula—FACTORY—Timken Detroit Axel Co., c/o Bossart Div., Box 928, New Castle, Pa., two 1 story, 52x300 ft., concrete, block, stone factory addn. in Saybrook Twp. at 20 W. of Sanborn St. $150,000.

SOON LETS CONTRACT

Ala., Birmingham—LAUNDRY—Domestic Laundry Co., c/o P. S. McWhinney, Title Guarantee Bldg., soon lets contract 100x140 ft. laundry addn.

Ala., Gadsden—LAUNDRY, etc.—Quality Laundry & Furrier, c/o Charles H. McCauley, archt., Jackson Bldg., Birmingham, soon lets contract laundry and furrier.

O., Mansfield—PLANT—Mansfield News Journal, 24 W. 4 St., soon lets contract newspaper plant and office. $500,000. Plans deposit $10. CD 5/25.

Pa., Phila.—SHOP—Firestone Tire & Rubber Co., 1620 S. 49 St., soon lets contract brick and masonry shop. Approx. $68,000.

Tex., Baytown—WAREHOUSE, etc.—Humble Oil & Refining Co., Baytown, soon lets contract 1 story 56,000 sq. ft. concrete, steel frame and fdn., masonry warehouse and shop, $450,000; outside storage yard, railway tracks; 120,000 sq. ft. asph. paved area. $225,000. CD 2/19/48.

Tex., Odessa—WAREHOUSE—G-B Realty Co., 1609 Young St., Dallas, soon lets contract warehouse. W. Edwards, 1509-A Cochran St., Dallas, archt. CD 6/7.

CONTRACTS AWARDED

Conn., Glastonbury—WAREHOUSE—Consolidated Tobacco Corp., 651 Windsor St., Hartford, 1 story, 87,000 sq. ft. floor space, cinder block, brick, tobacco warehouse, Oak St., to Bartlett Brainerd Co., 103 Woodbine St., Hartford. Approx. **$400,000.**

●**Mass., Somerset**—POWER PLANT—Montaup Electric Co., Box 391 Somerset, design and construction 4 story, 150x250 ft., brick steel, concrete power plant, 15 mi. rural distr. lines, 4 mi. steel towers, 11 mi. wood H frame, to Stone & Webster Eng. Corp., 49 Federal St., Boston, **$13,000,000-$14,000,000.**

Mo., St. Louis—FACTORY—F. Burkart Mfg. Co., 5000 N. 2 St., Zone 7, 1 story, 113x221 ft., concrete, steel factory, 300 block E. Gano St., to Willingham Constr. Co., 5701 Vernon Ave., Zone 12. Approx. **$80,000.** Metz & Eason, 3800 W. Pine Blvd., Zone 8, engrs.

●**O., Euclid**—STORAGE, etc.—Lincoln Electric Co., 22818 Coit Rd., Cleveland, design and construction 1 story storage and admin. bldg., to Austin Co., 16112 Euclid Ave., Cleveland, **$8,500,000.** CD 6/3.

●**O., Lancaster**—PLANT—Diamond Power Specialty Corp., 10340 Oakland St., Detroit, Mich., plant and office, 2 mi. east of here, off U. S. Route 22, to Austin Co., 16112 Euclid Ave., Cleveland. Approx. **$2,000,000.**

O., South Euclid (Br. Cleveland)—GARAGE—Mayflower Village, Inc., 1389 Cedar Rd., Cleveland Heights, 1 story approx. 107x1,000 ft. concrete block garage, Warrensville Center Rd. and Cedar Ave., separate contracts. **$300,000.** Maxwell H. White, Finance Bldg., Cleveland, archt.

●**O., Youngstown**—COKE OVENS, etc.—Republic Steel Corp., Republic Bldg., Cleveland, new battery byproduct coke ovens and material handling facilities, to Koppers Co., Inc., Koppers Bldg., Pittsburgh, Pa. Est. **$8,000,000-$10,000,000.**

R. I., Providence—FACTORY—Page Realty Co., Inc., 119 Friendship St., 3 story, 90x160 ft., brick, steel factory, Friendship St., to Hope Bldg. Co., 36 Exchange St., approx. **$100,000.** DiMitri & DiMitri, 17 Exchange St., archts.

Tex., Houston—PLANT—J. C. Ed and Harvey Suttles, 3978 Del Monte St., metal products mfg. plant, to Metallic Building Co., 224 Rains St., Approx. **$135,000;** rein.-con. plant foundation and bsmnt. and railway spur tracks, to Tellepsen Constr. Co., 1710 Telephone Rd., Approx. **$72,000.** CD 6/17.

Tex., Kyle—DEHYDRATING UNIT, WAREHOUSE—J. D. & Ernest Cummings, San Marcos and Sugarland, alfalfa dehydrating unit and warehouse, near here. Owner builds. Approx. **$150,000.** CD 6/21.

●**Tex., McAllen**—CYCLING PLANT—Mayfair Minerals, Inc. and Coastal Refineries, Inc., c/o V. E. Cook, McAllen, 75,000,000 cu. ft. gas daily capacity cycling plant, to Gasoline Plants Constr. Co., Neils Esperson Bldg., Houston, Approx. **$1,000,000.** CD 6/21.

Tex., San Marcos—DEHYDRATING UNIT, WAREHOUSE—J. D. & Ernest Cummings, San Marcos and Sugarland, alfalfa dehydrating unit, warehouse. Owner builds. Approx. **$145,000.** CD 6/21.

Wis., Medford—FACTORY—Hurd Millwork Co., Medford, 2 story, 140x300 ft. steel, block, tile factory, day labor. **$150,000.** C. E. Mohrs & Assoc., 2550 University Ave., Madison, engrs.

Alta., Edmonton—PLANT—Burns & Co. Ltd., 120 Ave. and 72 St., 4 story, 60x130 ft., concrete, brick plant addns., to Bird Constr. Co. Ltd., 708 Confederation Life Bldg. Winnipeg, Man., Approx. **$500,000.**

UNCLASSIFIED

BIDS ASKED

July 6

Ga., Augusta—SWIMMING POOL, etc.—City, Steed Avenue Swimming Pool and Bath House. Approx. $50,000. Plans deposit $25. Willis & Helen Irvin, 722 Green St., archts. CD 2/23.

Nebraska—RURAL DISTRIBUTION LINES—Southwest Electric Membership Corp., Palisade, approx. 437.29 mi. rural distr. lines, Hitchcock, Dundy, Chase, Hayes and Red Willow Counties. Approx. $50,000. Plans deposit $25. Flora Eng. Co., 1717 E. Colfax Ave., Denver, Colo., engr. and archt. CD 9/14/48.

July 12

†**Montana**—TRANSFORMERS—U. S. Eng., Fort Peck, four 8,333 kva. 13.8 69 kv. Grd. Y oil immersed self cooled, single phase transformers, appurtenances, Outdoor Substation Yard, Fort Peck Power Plant, Serial No. Eng.-24-016-49-85.

August 2

†**Washington**—CURRENT TRANSFORMERS—Bureau Reclamation, Dpt., Interior, Bldg. 1-A, Denver Federal Center, Denver, Colo., furnishing, del. f.o.b. cars shipping point or f.o.b. cars at Odair, 108 current transformers etc. misc. materials for installing current transformers in switchgear will be furnished for 6,900-volt station-service switchgear, Grand Coulee Left Power Plant, Columbia Basin Proj., Spec. 2715. L. N. McClellan, ch. engr.

SOON LETS CONTRACT

●**Colo., Littleton**—RACING ADMINISTRATION BLDG.—Centennial Turf Club, c/o Roy D. Barnes, pres., E & C Bldg., Denver, soon lets general contract racing administration bldg. $1,740,000. Henry A. Koch, Chamber of Commerce Bldg., Denver, archt. Clarence W. Mayhew, 251 Post St., San Francisco, Calif., assoc. engr.

Tex., Austin—SWIMMING POOL—Country Club of Austin Building Corp., F. Reeves, pres., c/o Page, Southerland & Page, engrs., 602 West Ave., soon lets contract rein.-con. swimming pool. $75,000. (**Correction**-project reduced). CD 6/14, under Commercial Buildings.

LOW BIDDERS

Calif., Los Angeles—GRADING AND LANDSCAPING—Bd. Regents, University of California, 451 S. Hilgard Ave., grading, landscaping campus, from Garn L. Moody, 11036 Shermway Way, Los. Ageles. **$143,994.** Est. $150,000 CD 6/6, under Public Bldgs.

Calif., Los Angeles—BATH HOUSE, etc.—Bd. Supervs. Los Angeles Co., 501 Hall of Records, June 14, H. M. Newhall Memorial Park bath house, from C. E. De Witt, 11379 San Fernando Rd., **$80,210.** Est. $87,600; Plummer Park community bldg., from Oltmaus Constr. Co., 810 E. 18 St., **$165,840,** est. $135,000. CD 5/24.

Calif., Los Angeles—COMMUNITY BLDG., etc.—Bd. Supervs. Los Angeles Co., 501 Hall of Records, June 14, Franklin Delano Roosevelt Memorial Park Community Bldg., and Gymnasium, from Hal McGraw, 2951 Long Beach Blvd., **$105,000.** Est. $130,000. CD 5/23.

Calif., San Francisco—GOLF COURSE—Park Com. of City and San Francisco Co. McLaren Lodge, Golden Gate Park, San Francisco, June 13, pitch and putt golf course in Golden Gate Park, from George Paulsen, 2922 25 Ave., **$72,475.** CD 11/13/47.

Mo., Columbia—STADIUM—University of Missouri, c/o Curators of University, Leslie Cowan, vice pres., Jesse Hall, Columbia, June 15, rein.-con. addn. to Memorial Stadium, from John Epple Constr. Co., 401 S. 6 St., **$174,000.** CD 6/8.

Texas—RURAL DISTRIBUTION LINES—Rio Grande Electric Co-operative, Brackettville, June 15, 250 mi. rural distr. lines, Val-Vedde Co., from Cisco Electric Co., Conro, **$255,289.** Est. $210,000. CD 6/2.

†**Washington**—TRANSMISSION LINE—Bonneville Power Admin., 729 N. E. Oregon St., Portland, 8, Ore., Fairmount-Port Angeles 115 kv. transmission line, Jefferson and Clallam Counties, Inv. 4637, from L. H. Leonard Constr. Co., San Rafael, Calif., **$99,601.** CD 5/25.

†**W. Va., Morgantown**—COAL BLENDING FACILITIES—U. S. Eng., 830 W. Broadway, Louisville 3, Ky., June 8, design, fabrication, construction, installation coal blending facilities at Morgantown Ordnance Works, Serial No. Eng-15-029-49-133, from H. K. Ferguson Co., 1783 E. 11 St., Cleveland, O., **$594,000.** CD 5/23.

Wyo., Laramie—STADIUM—University of Wyoming, Laramie, rejected bids June 14, war memorial stadium, LB. **$356,623.** CD 6/21.

CONTRACTS AWARDED

Alabama—RURAL DISTRIBUTION LINES—Joe Wheeler Electric Membership Corp., Hartselle, 381 mi. rural distr. lines, Morgan Co., to Dent Constr. Co., Sheffield, **$534,513** Bids 5/10. CD 5/17, under LB.

Alabama—RURAL DISTRIBUTION LINES—Sand Mountain Electric Co-operative, Fort Payne, 240 mi. rural distr. lines, KeKalb Co., to Irby Constr. Co., 817 S. State St., Jackson, Miss., **$320,322.** CD 5/6.

(Continued on page 42)

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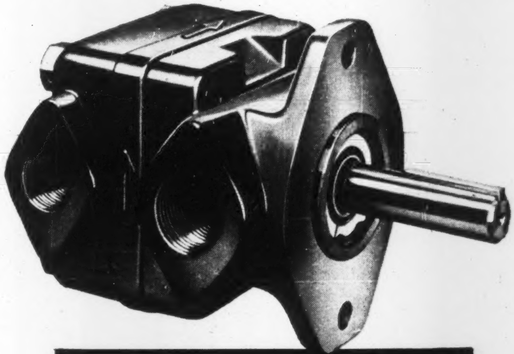

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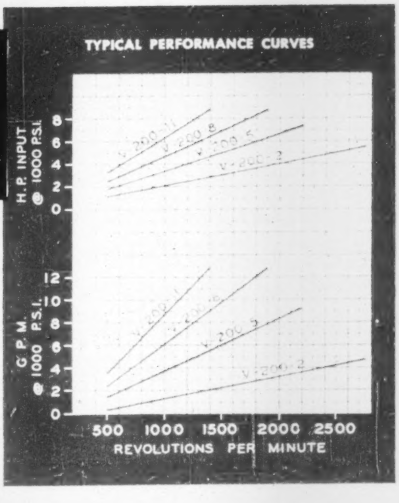

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(Continued from page 40)

Arizona—RURAL DISTRIBUTION LINES—Trico Electric Co-operative, Inc., 3800 N. Oracle Rd., Tucson, 45.5 mi. rural distr. lines, Pima Co., to Simmons Constr. Co., 2234 N. 16 St., Phoenix, **$61,547.** J. V. Swain, 3800 N. Oracle Rd., Tucson, engr. CD 2/28.

Arkansas—RURAL DISTRIBUTION LINES—Graham County Electric Co-operative, Inc., Pima, 50.56 mi. rural distr. line, Graham Co., to Corbin & Davis Electric Co., 623 S. Second St., Phoenix, labor **$31,302,** materials **$50,000,** total $81,302. Price & Hawk, 1509 13 St., Lubbock, Tex., engrs. CD 1/14.

Ga., Hamilton — RECREATION AREA — Cason J. Calloway, c/o John Leon Hoffman, Inc., archt., Forsyth, recreation area, incl. lake, golf course, clubhouse, fishing facilities. Owner builds. **$100,000.**

Ind., Angola—DRIVE-IN THEATRE—Clair Stukey, c/o Warren Theatre, Warren, and Matt Scheidler, Hartford City, drive-in theatre, 1.5 mi. from here, separate contracts. Approx. **$100,000.**

Kentucky—RURAL DISTRIBUTION LINES—Fleming-Mason Rural Electric Co-operative Corp., Flemingsburg, 61.3 mi. rural distr. lines, Fleming Co., to Shely Constr. Co., 809 Manchester St., Lexington, labor **$28,995,** materials **$61,000,** total $89,995. CD 4/18.

Ky., Franklin—DRIVE-IN THEATRE—G. C. Jones and T. H. Jones, c/o Liberty Theatre, Franklin, drive-in theatre, Russellville Rd., approx. 1.5 mi. west of here, separate contracts.

Louisiana—RURAL DISTRIBUTION LINES—Louisiana Rural Electric Corp., Alexandria, 247 mi. rural distr. lines, Grant, Natchitoches, Evangeline, Avoyelles and St. Landry Parishes, to Kincade & Lofton, Brookhaven, Miss., **$328,860.** Bids 4/4. CD 4/6.

Michigan—RURAL DISTRIBUTION LINES—Western Michigan Electric Co-operative, Scottville, 64 mi. rural distr. lines, Mason Co., to Muncie Constr. Corp., Muncie, Ind., labor **$23,829,** materials **$64,000,** total $87,829. J. & G. Daverman Co., 301 Keeler Bldg., Grand Rapids, Zone 2, engr.

Minnesota—RURAL DISTRIBUTION LINES—Clearwater Polk Electric Co-operative, O. V. Beaver, mgr., labor only, 243 mi. rural electric distr. lines, Clearwater and Polk Counties, to Lite-Rite Electric Service, Melrose, **$67,176.** C. J. Hastad, Halstad, engr. CD 5/24.

Missouri—RURAL DISTRIBUTION LINES—Laclede Electric Co-operative, Lebanon, 217.5 mi. rural distr. lines, Laclede Co., to Thaxton Eng. & Constr. Co., 4801 Connecticut Ave., N. W., Wash., D. C., **$310,512.** Bids 4/26. CD 4/12. 14.7 mi. rural distr. lines, Laclede Co., to Walco Eng. & Constr. Co., 2408 E. 4 Pl., Tulsa, Zone 4, Okla., **$73,796.** CD 10/22.

Missouri—RURAL DISTRIBUTION LINES—Nodaway-Worth Electric Co-operative, Inc., Maryville, 461.51 mi. rural distr. lines, Nodaway Co., to A. A. Electric Co., 3125 S. 60 Ct., Cicero, Ill., **$674,347.** CD 4/18, under LB.

Missouri—RURAL DISTRIBUTION LINES—North Central Missouri Electric Co-operative; Milan, 166.1 mi. rural distr. line, Sullivan Co., to D. K. L. Constr. Co., 214 Weston St., Jackson, Miss., labor **$55,493,** material **$166,000,** grand total $221,493. Bids 4/28. CD 4/12.

Montana—RURAL DISTRIBUTION LINES—Big Flat Electric Co-operative Inc., Turner, 107 mi. rural distr. lines, Blaine Co. to O'Neil Constr. Co., Havre, labor **$41,167,** materials **$107,000,** total $148,167. T. T. Heberly, Box 1044 Malta, engr. CD 11/10/47.

North Dakota — RURAL DISTRIBUTION LINES — Verendrye Electric Co-operative Velva, 575 mi. rural Distr. lines, McHenry Co., to Sorkness Constr. Co., Fargo, **$635,664.** Bids 5/20. CD 6/1, under LB.

Texas—PIPELINE—Texas Pipe Line Co., Texas Co., Bldg., Houston, 90 mi. 8 in. petroleum products pipeline between Hearne and Austin, to Smith Contg. Co., Fort Worth Natl Bank Bldg., Fort Worth, **$675,000.** CD 7/8/46.

+Washington — TRANSMISSION LINES — Bonneville Power Admin., 729 N. E. Oregon St., Portland 8, Ore., 77 mi. Columbia-Grand Coulee No. 3, 230 kv. transmission line, Douglas, Grand and Okanogan Counties, to Smith & White, White Bldg., Seattle, Wash., **$897,622.** Bids 6/7, awarded 6/15. CD 6/14, under LB.

Alaska—RURAL DISTRIBUTION LINES—Chugach Electric Assoc. Inc., Anchorage, 57.81 mi. rural distr. lines, Chugach Co., to Wiggins Constr. Co., Box 2346, Anchorage, **$70,780.** Victor C. Rivers, Anchorage, engr. CD 6/24/48.

Alta., Coronation—GAS WELL—Sun Oil Co., 1608 Walnut St., Phila. Pa., gas wells, to Loffland Bros., c/o owner. Approx. **$200,000.**

Ont., Port Stanley — PIER — Dpt. P. Wks., Hunter Bldg., Ottawa, pier reconstruction, to Canadian Dredge & Dock Co. Ltd., Harbour Commissioners Bldg., Toronto. Approx. **$129,971.** Est. $150,000. R. Blais, c/o owner, engr. Bids 6/15. CD 6/3.

Que., Matane — WHARF — Dpt. P. Wks., Hunter Bldg., Ottawa, Ont., wharf reconstruction, to North Shore Constr. Co. Ltd., Canada Cement Bldg., P. O. Box, 107, Station B, Montreal. Approx. **$559,940.** Est. $350,000. Bids 6/15. CD 6/2.

CONSTRUCTION REPORTS—Second Section

Third Section Construction Reports on page 52

WATER SUPPLY

BIDS ASKED

July 4

Ont., Belleville—O. H. Scott, secy. P. Utilities Comn., 677 Front St., approx. 7,600 ft. 6 and 10 in. watermain county home subdivision and adjoining streets. Approx. $45,000. Plans deposit $10. Goge & Storrie, 1130 Bay St., Toronto, engrs. CD 6/2/44.

July 6

La., Breaux Bridge—Town, Town Hall, WW imprvs. Plans deposit $20. J. B. McCrary Eng. Corp., 22 Marietta St. Bldg., Atlanta, Ga., engrs. Bids 5/23, rejected, L.B. **$63,200.** CD 6/2, under LB.

Que., Montreal—Executive Com., City Hall, McTavish Pumping Station extens. for Municipality. Plans deposit $100. H. A. Gibeau, city engr. CD 5/4—ENR 6/9.

July 8

Ga., Calhoun—City, WW imprvs. Approx. $100,000. Plans deposit $25. Wiedman & Singleton, Citizens Southern National Bank Bldg., Atlanta, engrs. CD 1/13.

Miss., Brooksville—Town, W. B. Tate, clk., Town Hall, deep water well, motor driven pump equip. Extended date. Plans deposit $10. CD 5/27.

O., Berea—City, 47 E. Bridge St., structural addn. to WW sys. at various locations in Berea of rein.-con., brick incl. bldg. alterations, water treatment basin, chemical feeders, flow meters, piping and pumps. $40,000. Plans deposit $10. Finklbeiner, Pettis & Strout, 602 Manhattan Bldg., Toledo, consult. engrs. CD 9/16/48, under LB.

July 11

†S. D., Huron—Bd. Comrs., Huron, water softening plant. Plans deposit $50. E. H. Dunmire, 2774 South St., Lincoln, Neb., consult. engr.; adv. ENR 6/23. CD 10/1/48—ENR 10/28/48.

LOW BIDDERS

Tenn., Petros — State, Nashville, June 14, filtration plant at Brushy Mountain Prison, from B. G. Young & Sons, Johnson City, **$274,384.** CD 6/8, under Tenn., Nashville.

CONTRACTS AWARDED

O., Loudonville — Village, water softening and filtration plant, to DeLuca Constr. Co., 1055 Grant St., Akron, **$101,680.** Bids 5/28, awarded 6/6.

Tex., Fort Worth—City, City Hall, waterlines different parts of city, force account. **$125,000.** W. O. Jones, city engr. CD 8/31/44—ENR 9/21/44.

SEWERS, WASTE DISPOSAL

BIDS ASKED

July 11

Calif., Fairfax—Sanitary Dist. 1, 11 Library Pl., San Anselmo, sewage collection system, $360,000. Plans deposit $20. Frank W. Aitken, Jr., 533 Magnolia St., Larkspur, engr. CD 9/21/48.

July 13

Calif., Los Angeles—Los Angeles Co. Sanitation Dist. 1, 1206 S. Maple Ave., 7,800 ft. 30- to 36-in. rein.-con. California Ave. Exten. Trunk Sewer, Sect. 4, South Gate, $150,000. A. M. Rawn, 1206 S. Maple Ave., engr.

Calif., Los Angeles—Los Angeles Sanitation Dist. 3, 1206 S. Maple St., 130,000 ft. 30 in. rein.-con. North Long Beach Trunk Sewer Sect. 1, North Long Beach. $250,000. A. M. Rawn, 1026 S. Maple Ave., engr.

LOW BIDDERS

O. Euclid—City, 583 E. 222 St., June 3, storm and sanitary sewer from Euclid Ave. to Lakeland Blvd., from Tony Apple Sewer & Water Constr. Co., 15434 Lakeshore Blvd., Cleveland, concrete pipe **$140,009**, vitr. pipe **$150,868.**

Pa., Susquehanna Twp.—Susquehanna Twp. Auth., c/o H. A. Levan, 25 N. Front St., Harrisburg, June 16, sewerage sys. and pump. station, Proj. A. and C. from Globe Contg. Co., 609 N. 68 Ct., Phila., **$205,946** and **$291,692** respectively; Proj. B. from R. E. Wolfe, 1725 Market St., Harrisburg, **$155,740.** CD 5/28.

Tex., McAllen—City, City Hall, June 1, storm sewers, from J. D. George Constr. Co., 3331 Parkwood St., Houston, **$144,136.** Est. $140,000. CD 5/25—ENR 6/2.

Tex., McAllen—City, City Hall, June 15, storm sewer, from Mitchell Darby Constr. Co., Box 479, Pharr, and W. T. Liston, Co., McAllen, **$144,537.** CD 5/13, under LB.

Que., Dorval—Town, J. H. Lalonde, secy., Dorval, collector sewer, from Frank Ross Constr. Ltd., 736 Cote St. Catherine Rd., Montreal, Approx. **$548,000** (**Correction**—low bidder). CD 6/13, under LB.

BRIDGES

BIDS ASKED

July 5

Ont., Toronto—Chairman Bd. Control, bridge over Old Kings College Rd., for Municipality. Approx. $100,000. M. Stewart, city engr.

LOW BIDDERS

Indiana—State Hy. Dpt., Indianapolis, June 21, 9 span 240 ft. steel beam, rein.-con girder bridge, untreated timber piling, c. conc. 0.498 mi. approaches over Prairie Creek and C. C. C. & St. Louis Ry., west of Lebanon, Boone Co., from Gradle Bros., Carmel, **$296,346, Est. $422,027*****3 span 209 ft. continuous steel beam bridge, grading, 0.651 mi. approaches over Pigeon Creek, St. John-Elberfield Rd., north of State Rt. 62, Warrick Co., from J. L. Wilson, Bloomfield, **$92,968,** est. $119,090***4 span 262 ft. continuous steel beam bridge, grading 0.404 mi. approaches, over Big Blue River, Rush Co., and 3 span 207 ft. continuous rein.-con. girder bridge, steel encased concrete piling over St. Marys River, bit. surf. 0.102 mi. approaches, Allen Co., from Kahl & Mahon, Liberty, **$73,204,** est. $100,952 and **$64,042,** est. $92,505 respectively. CD 6/6.

●**Louisiana and Texas**—State Hy. Dpts. Baton Rouge, La. and Austin, Tex., June 22, Sabine and Calcasieu Parish, La., from Austin Bridge River Bridge, FI 1091 (1), Orange Co. Tex. Co., 1000 Singleton Blvd., Dallas, Tex., **$1,771,484.** CD 6/9.

Maryland—State. Hy. Dpt., Baltimore, June 21, dual 6 span steel I-beam bridges to carry Washington Baltimore Expressway over Penn. R. R. and Stoney Run, near Baltimore, Contr. AA 368-5-358, Anne Arundel Co., from Brooklyn Eng. Corp., 1100 E. 25 St., Baltimore, **$502,405.** CD 6/9.

Massachusetts—Commonwealth of Massachusetts, Dpt. P. Wks., 100 Nashua St., Boston, June 14, highway and bridge, Rt 6, F 36 (8), Wellfleet, from M. F. Roach Co., 27 Central St., East Bridgewater **$506,954,** CD 6/2; highway and bridge, Housatonic River, Pittsfield, from David M. Deans, Williamstown, **$88,136.** CD 6/9.

Minnesota—State Hy. Dpt., St. Paul, June 10, Bridge 5895, street wid'n., 5 concrete deck girder spans, concrete deck on steel superstructure over Mississippi River, Vermillion St., S. P. 1913-07 (T. H. 61-3), Minnesota Proj. U 307 (16), Hastings, from Graus Constr. Co., Hastings, **$356,600.** CD 5/26.

●**New York** — Bureau Contracts & Accounts, Albany, June 22, 12 span 1,497 ft. steel viaduct across tracks and yard of Independent Rapid Transit Co., grading, approaches, drainage structures and utility services 0.4 mi. Bronx River Parkway, Southern Extens. from 180 St. northward Bronx Co. from Cayuga Foundation Corp., 30 Vesey St., New York, **$2,361,551** est. $2,465,000***2 span, 138 ft. steel girder grade separation structure at New York, New Haven & Hartford R. R., 101 ft. single span steel girder structure over Tremont Ave., grading, drainage approaches 0.17 mi. Bronx River Parkway, Southern Extens., Bronx Co., from Brookfield Constr. Co. Inc., 521 5 Ave., New York, **$915,827** est. $1,019,000***46 ft. span I-beam bridge, grading, drainage and 22 ft. b. conc. approaches Route 38 in Moravia, Cayuga Co. from Les Strong Constr. Co., Main St., Whitney Point, **$84,887** est. $100,000***3 span 324 ft. cantilever deck girder bridge, b. conc. approaches 0.44 mi. grading, drainage and removing old structure, replacing bridge E-170 to carry Long Pond Rd. over Barge Canal near the Greece-Gates town line about 2 mi. south of Greece, Monroe Co. from C. P. Ward, Inc., 700 Hollenbeck St., Rochester, **$364,873** est. $404,271. Cancelled bids to have been opened June 22, 47 ft. I-beam structure carrying tracks of West Shore R. R. over New Main St., 50 ft. I-beam bridge to carry Conger Ave. (Route 9W) over New Main St. pedestrian subway under tracks at Westside Ave.; bit. macad. 0.28 mi. on affected streets and access roads, grading and drainage structures, Rockland Co. **$833,000.** CD 6/2.

Tennessee—State Hy. Dpt., Nashville, June 17, bridge, approaches over south fork of Forked Deer River on Secondary Route 8061, 2½ mi. east of Henderson Co., Chester Co., from Forcum-James Co., 1489 Thomas St., Memphis, **$83,678*****0.4 mi. bridge, approaches over Harpeth River from State Route 1 toward Kingston Springs, Secondary Route 6152, Cheatham Co., from Foster & Creighton, American Natl. Bank Bldg., Nashville, **$101,778*****0.4 mi. overhead bridge, approaches over L. & N. R. R., State Route 96 at Harrington, Williamson Co., from Marion Constr. Co., Curtiswood Lane, Nashville, **$61,288*****reconditioning bascule span on Market St. Bridge over Tennessee River, State Route 27 in Chattanooga, Hamilton Co., from George O. White, Signal Mountain, **$123,510*****6 mi. bridge, approaches over Duck River State Route 50 approx. 3.5 mi. west of Centerville, Hickman Co. from C. A. Thompson, Centerville, **$272,868.** 5/26.

CONTRACTS AWARDED

Minnesota—State Hy. Dpt., St. Paul, Bridge 5495, S. P. 4001 11 (TH 13-13) Minn. Proj. F 346 (11), Waterville; bridge 6678, S. P. 2724-24 (TH 55-116) Minn. Proj. U 800 (5), Minneapolis, to New London Materials & Constr. Co. 4613 Oak Dr., Minneapolis, **$51,393** and **$95,131** respectively. Bids 6/10. CD 6/23.

Wash., Seattle—City, County-City Bldg., rein.-con., steel bridge on Admiral Way, to T. N. Buchanan Co., 835 W. 48 St., Seattle. **$110,513.** Est. $113,116. Bids 6/15. CD 6/8.

STREETS AND ROADS

BIDS ASKED

July 12

Tex., Corpus Christi—Nueces Co., Corpus Christi, flexible base course and asp. surf. 11.23 mi. Precinct 1, $115,000; flexible base course, asph. surf. 6.91 mi. and asph. seal coat, 8.93 mi. Precinct 2, $90,000; flexible base road course and asph. surf. 20.7 mi. Precinct 3, $190,000; 13.1 mi. Precinct 4, $130,000. Jesse R. Laurence, co. engr. CD 12/27/48.

July 13

La., Charenton—St. Mary Parish Police Jury, Teche Dr., Franklin, concrete sidewalks. T. F. Kramer, 108 Commercial St., Franklin, engr.

July 22

Pennsylvania—Pennsylvania Turnpike Comn., 11 N. 4 St., Harrisburg.

Chester Co.—grading, drainage, structures, paving 4.74 mi. Turnpike Sect. 28B-1, Tredyffrin, East Whiteland and Charlestown Twps.

Chester and Montgomery Counties—grading, drainage, structures, paving 2.99 mi. Turnpike Sect. 28B-2, Tredyffrin Twp., Chester Co. and Upper Merion Twp., Montgomery Co.

LOW BIDDERS

†California—Pub. Rds. Admin., Phelan Bldg., San Francisco, rejected bids June 7, hy. imprv. 3.298 mi. Calif. FH-90-B Western Divide, Sequoia National Forest, Tulare Co., L. B. **$606,726.** CD 6/14, under LB.

California — State Div. Hys., Sacramento, June 8, imported material, apply penetration treatment, seal coat 3.9 mi. between Lotus—Rescue Rd. and State Rt. 65, El Dorado Co., from Tyson & Walters Co., Box 1914, Sacramento, **$54,701**; untreated rock base over existing surf., plant mix surf. on central portion, imported borrow shoulders, place metal guard railing on Borden Hy. between Old River and Middle River, San Joaquin Co., from M. J. Ruddy & Son, 922 J St., Modesto, **$101,884.** CD 5/18.

California — State Div. Hys., Sacramento, June 15, c. conc. on cement treated subgrade, plant mix on existing pavement surf. on various types of bases, constr. misc. lighting facilities 5.8 mi. between Greenville and 1.5 mi. west of Livermore, Alameda Co., from N. M. Ball Sons, Box 430, Berkeley, and Harms Bros., 5261 Stockton Blvd., Sacramento, **$888,292**; grav. plant mix surf. 0.5 mi. between intersection of Commercial Row with bridge St. and ½ mi. east Truckee, Nevada Co., from J. Henry Harris, 2657 9 St., Berkeley, **$64,879.** CD 5/23.

Calif., Los Angeles—Los Angeles Co., 501 Hall of Records, May 31, imprv. 2.14 mi. Ganesha Blvd., Walnut Ave. to Garvey-Holt Hy., from Cox Bros. Constr. Co., P. O. Box 36, Stanton, **$196,506.** CD 3/11—ENR 5/19.

Colorado—State Hy. Dpt., Denver, June 10, grav., structures and oil processing 7.998 mi. State Hy. 91, beginning at point approx. 4 mi. west of summit of Loveland Pass and exten. over the Pass to point approx. 4 mi. east of the Pass, Colo. Proj. No. (51-61)-51-507, Summitt and Clear Creek Counties, from Colorado Constructors, Inc., 425 W. 39 Ave., Denver, **$444,074.**

Idaho—State Hy. Dpt., Boise, bit. surf. 10.269 mi. seal coat 10.989 mi. North-South Highway, Lewis Co., from Canyon Constr. Co., Caldwell, **$148,798,** est. $162,610; reconditioning roadbed, bit. surf. 10.175 mi. U. S. 93, Lemhi Co., from Holmes Constr. Co., Heyburn, **$116,985,** est. $112,035.

Kentucky—State Hy. Dpt., Frankfort, rejected bids June 10, traffic bound limestone 6.029 mi. RS 112-138, Trimble Co., L. B. **$77,221*****traffic bound limestone 9.018 mi. RS 62-361 and RS 62-361, Larue Co., L. B. **$171,881*****traffic bound limestone 8.396 mi. RS (55-169) (55-189), Jackson Co., L. B. **$116,745*****traffic bound limestone 6.75 mi. RS 8-140 and RS 8-430, Boone Co., L. B. **$90,763.** Will readvertise. CD 6/17, under LB.

●**Maryland**—State Hy. Dpt., Baltimore, June 21, grading, draining, surf. relocation 6.939 mi. U. S. Rt. 40, Proj. A-407-1-615 and W 392-1-615, Washington and Allegany Counties, from M. J. Grove Lime Co., Lime Kiln, **$2,090,212,** CD 6/15; grading, rein-con. underpass, Contr. B 578-4-415, Baltimore Co., from Allied Contractors, Inc., 204 E. Preston St., Baltimore, **$57,943.** CD 6/8.

Nevada—State Hy. Dpt., Carson City, June 9, constructing 1.537 mi. portion State Hy. Sys. from approx. 0.4 mi. east of West City Limits of Elko to 13 St. in Elko, Elko Co., from Gibbons & Reed Co., 259 W. 3 South St., Salt Lake City, Utah, **$264,079.**

●**New York**—Bureau Contracts & Accounts, Albany, June 22, wid'n., c. conc. and b. conc. resurf. 2.44 mi. Route 98 from Wyoming-Cattaraugus Co. line southeastward through the village of Sandusky, R. C. 49-66, Cattaraugus Co., from Lancaster Development, Inc., Lancaster, **$110,874** est. $130,000***wid'n., 24 ft. b. conc. resurf. 4.64 mi. c. conc. Rt. 7 from Chenango-Broome Co. line at Nineveh northeastward to Afton, Chenango Co., from Mohawk Paving Co. Inc., Geneva, **$190,619** est. $211,000***grading, drainage structures 2.32 mi. gravel fdn. course on 1.38 mi. Ontario Thruway from Walden Ave. northward to Beach Rd. and adjacent streets 9.94 mi. and channel change, Erie Co., from Main Constr. Corp., Depew, **$771,440** est. $957,000***by-pass road 2.44 mi. west Geneseo, from Route 29 A northerly to Rte. 63, incl. 280 ft. steel bridge over Genesee River, c. conc. 2.33 mi. and b. conc. 0.14 mi. on by-pass and street connections, grading, drainage, Livingston Co. from Bero Eng. & Constr. Corp., McKinley Bldg., Buffalo, **$773,607,** est. $854,000***b. conc. wid'n., resurf. 3.7 mi. Rte. 27 bewteen Quoque and Southampton incl. 1.37 mi. between Quoque and East Quoque wid'n. to 42 ft. and 24 ft.

(Continued on page 46)

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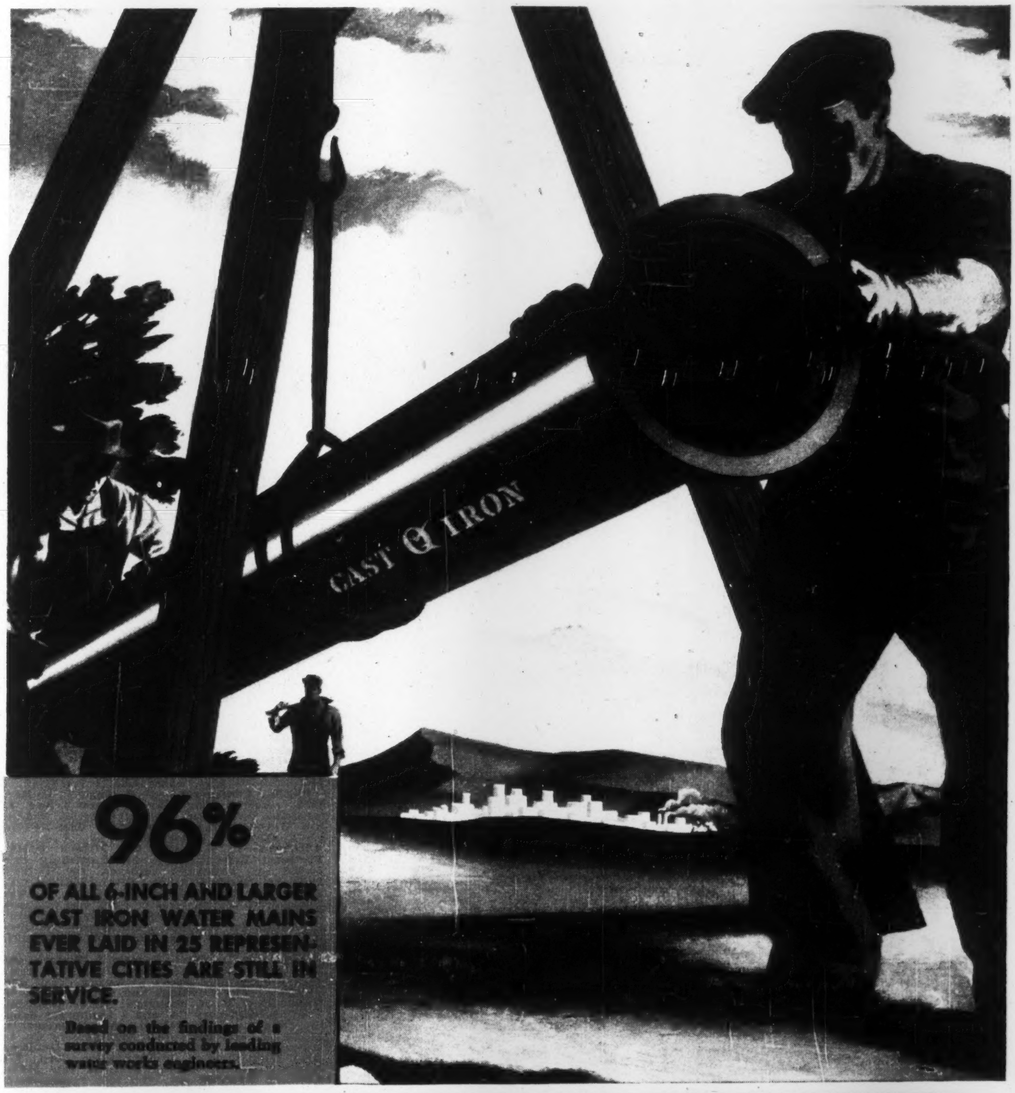

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Based on the findings of a survey conducted by leading water works engineers.

SERVES FOR CENTURIES

(Continued from page 43)

resurf. wid'n., 2.33 mi. exten. east from Canoe Place, Suffolk Co. from William H. Green, Grand Blvd., Westbury, **$146,325** est. $180,000 ***Cancelled bids to have been opened June 22, 22 ft. bit. treated grav. pavement 5.71 mi. Old Military Turnpike Exten. southeasterly from Trona-Ledgers Corners Co. Rd., incl. grading, drainage and two I-beam bridges, Clinton Co. **$500,000.** CD 6/2.

●**Texas**—State Hy. Comn., Austin, June 21, grading, base and surf. tr. Hy. U S 90, F. 270 (12), Medina Co., from M. E. Ruby & Norman L. Larson, 2410 Jarratt St., Austin, **$117,137*****grading, structures Hy. 200, F. 1051 (5), Lavaca and Colorado Counties, from H. B. Zachary Co., W. Harding Blvd., San Antonio **$167,228*****grading, flex. base and surf. tr. Hy. FM 38, S 424 (1), Lamar Co., from L. H. Lacy Co., 5630 Yale Blvd., Dallas, **$96,106*****base and surf. tr. Hy. FM 226 S 1081 (2), Nacogdoches Co. from Leon Tillman Constr. Co. & Moore Bros. Constr. Co., Lufkin, **$100,195*****grading, surf. tr. Hy. FM 211 and 400, S 1263 (1), Garza and Lynn Counties from Bryan & Hoffman, Plainview, **$133,707** ***flexible base, single asph. surf. tr. Hy. F. M. 892, S. 1233 (1), Nueces Co., from Heldenfels Bros., Rockport, **$72,699*****flexible base, surf. tr. Hy. 105, F 1032 (7) and (8), Liberty and Montgomery Counties from H. R. Henderson & Co., Marshall, **$70,769*****flexible base, b. conc. Hy. St. 107, Contr. No. C 342-1 and 2-8 and 8, Hidalgo Co., from E. B. Darby & Co., P. O. Box 467, Pharr, **$173,454*****pavement wid'n., Hy. U S 59, F 201 (10) Nacogdoches Co. and grading, surf. tr. Hy. FM 837, S. 1174 (1), Anderson Co., from Reynolds & Huff, Tyler, **$302,788** and **$77,152** respectively. CD 5/27.

●**Texas**—State Hy. Dpt., Austin, June 21, grading, structure Loop 12, F 1089 (3), Dallas Co., from Dean Word Co., New Braunfels, **$277,499*****grading, surf. Hy. FM 816, V 1097 1-1, Hunt Co., from T. C. Cage, 607 Travis Bldg., San Antonio, **$141,179*****grading, base and surf. tr. Hy. 105, C 813-1-2, Liberty Co., from R. C. Buckner, Jacksonville, **$70,246***** grading, base, surf. tr. FM 892, S, 1233 (1), Nueces Co., from Heldenfels Bros., Rockport, **$72,699*****c. conc. Hy. U. S. 96, F 159 (4), Shelby Co., from Howard Bros. & R. B. Butler, Madisonville and Bryan, **$261,855*****grading, shoulders, paving, F 634 (13), Tarrant Co., from Texas Bitulithic Co., Box 5297, Dallas, **$744,244*****grading, base, surf. tr. Hy. FM 51, S. 52 (7), Wise Co., from John F. Buckner & Sons, Cleburne, **$123,867.** CD 6/8.

●†**Alaska**—Pub. Roads Admin., Juneau, May 24, grading, bit. surf. 54 mi. Sect. B-1 Glenn Hy. between Palmer and Copper Center, from McLaughlin, Inc., Box 1824, Great Falls, Mont., **$1,755,150.** CD 6/1, under LB.

CONTRACTS AWARDED

Kentucky—State Hy. Dpt., Frankfort, traffic bound surf. 10.731 mi. Irvington-Grahamton Rd., New Rt. U. S. 60, F 523 (2), SP (14-333) (82-423), Breckinridge and Meade Counties, to Talbot-Myers Constr. Corp., Winchester, **$471,119.** CD 6/17, under LB.

Kentucky—State Hy. Dpt., Frankfort, bit. surf. Class I 18.32 mi. Jefferson Co., RH Group 4 (1949), to Breslin Constr. Co., 1801 S. Brook St., Louisville, **$120,901**; bit. surf. Class F, 12.15 mi. Madison Co., RH Group 2 (1949), to Allen Codell Co., Inc., Winchester **$63,882.** Bids 5/27. CD 5/11—ENR 5/19.

Minnesota—State Hy. Dpt., St. Paul, grav. base, plant mixed bit. surf. 14.4 mi. S. P. 4602-03 (TH 4-84) S. P. 4602-06 (TH 4-84) and S. P. 4606-07 (TH 16-9), grav. base, plant mixed bit. surf. 12.6 mi. S. P. 8301-08 TH 4-84 and S. P. 8302-04 (TH 4-84), to W. Hodgmen & Sons, Fairmont, **$238,104** and **$98,675** respectively***grading 6.1 mi. S. P. 1701-06 (TH 47-92), to R. Minion, Bingham Lake, **$62,564*****grav. base and plant mixed bit. surf. 15.7 mi. S. P. 4001-18 (TH 13-13) S. P. 8102-05 (TH 13-13) F. 346 (12) S. P. 4006-22 (TH 60-60), S. P. 4007-04 (TH 60-60) and S. P. 6606-08 (TH 60-60), to H. Ganley, Inc., 2336 Hampden Ave., St. Paul, **$198,667*****grav. base and road mixed bit. surf. 5.3 mi. S. P. 0911-17 (TH 61-1) F. I 325 (6), to J. Brown & E. Lundin, Mankato, **$99,068.** Grand total $697,078. Bids 6/10. CD 5/26.

Nevada—State Hy. Dpt., Carson City, 3.07 mi. 2 portions State Hy. from junction with U. S. 95 approx. $\frac{1}{2}$ mi. south of Fallon via Taylor St. to junction with U. S. 59 and 95 at Williams Ave. in Fallon, F. A. S. Route 518 and from junction with U. S. 50 approx. 4 mi. west of Fallon north toward Soad Lake, F. A. S. 517, Churchill Co., to Silver State Constr. Co., S. Main St., Fallon, **$138,980.** Bids 6/16. CD 6/8.

New York—Bureau Contracts & Accounts, Albany, 2.16 mi. Southern State Parkway, Deer Park Ave. to Howells Rd., SSP 49-2, Suffolk Co., to Zara Contg. Co., Inc., 11 Prospect Ave., Hewlett, **$534,345.** Bids 5/4. CD 5/9, under LB.

Ore., Albany—City, City Hall, street paving, to Warren Northwest, Inc., 9860 N. E. Hancock St., Portland, **$109,982.** Bids 6/8. Walter W. Larsen, city engr.

Tenn., Memphis—City, City Hall, paving Chelsea St. from Illinois Central R. R. east to Jackson St., to Foster-Creighton Co., American Natl. Bank Bldg., Nashville, **$228,665.**

Tex., Canton—Van Zandt Co., Leon Cox, judge, Courthouse, all weather road constr., approx. 20 mi. Roads 141, 215, 420 Precinct 1, to Dew Constr. Co., Tyler, **$210,000**; approx. 15 mi. Roads 349 and 383, Precinct 2, to Austin Contg. Co., 1000 Singleton Blvd., Dallas, **$190,000.** CD 4/8—ENR 4/28.

Tex., Galveston—Galveston Co., Courthouse, Bolivar Peninsula Rds., to Gerald Mora, 312 Sabine St., Houston, **$106,319.** CD 5/19—ENR 5/26.

Tex., Schulenburg—Fayette Co. Precinct 4, Courthouse, La Grange, all weather road construction, force account. **$100,000.** CD 7/23/48.

Virginia—State Hy. Dpt., Richmond, c. conc. 1.57 mi. from Route 244 (Columbia Pike) to east of Henry G. Shirley Memorial Hy., Route 120, Arlington Co., to W. H. Scott, Franklin, **$638,677.** Bids 6/14. CD 6/17, under LB.

West Virginia—State Road Comn., Charleston, grading, draining 4.929 mi. Ripley-Kanawha Co. Line Rd. Proj. F 106 (5), Jackson Co., to Keeley Constr. Co., Clarksburg, **$455,721**; road mix surf. 10.35 mi. Logan-Chapmanville Rd. Proj. 150-D, 150-A, 150, 65, 3288 and 2198, Logan Co., to John S. Gillisple, Inc., Huntington, **$67,727.** Bids 6/7, awarded 6/13. CD 5/27.

†**Alaska**—Pub. Roads Admin., 419 Federal and Territorial Bldg., Juneau, resurf. 4.9 mi. Mitkof Hy. Tongass Natl. Forest, Proj. 7-A5, B2, to Reed & Martin, Fairbanks, **$113,206.** CD 6/7.

EARTHWORK, WATERWAYS

BIDS ASKED

About July 6

†**Connecticut**—U. S. Eng., Army Base, Boston 10, Mass., maintenance dredging of West River, 12 ft. channel, New Haven Harbor.

July 6

†**Louisiana**—U. S. Eng., foot of Prytania St., New Orleans, Zone 9, channel imprv. 8x50 ft. Gulf Intracoastal Waterway, Franklin Canal, St. Mary Parish, Serial No. Eng-16-047-49-326.

July 7

Pennsylvania—Dpt. Forests & Waters, 404 Education Bldg., Harrisburg, silt impounding basins on Schuylkill River at Middle Abrams, Norristown, Birdsboro and Douglasville. $800,000. Plans deposit $10 each basin. Extended date. Schuylkill River Project Engineers, 20 S. 15 St., Phila., engrs. CD 6/10.

†**Wyoming**—Bureau Reclamation, Dpt. Interior, Bldg. 1-A, Denver Federal Center Denver, Colo., furnishing, del. f.o.b. cars shipping point or f.o.b. cars Casper, hollow metal doors, fire door and glazed metal partitions for Kortes Dam and Power Plant, Kortes Unit, Missouri River Basin Proj., Spec. 2708. L. N. McClellan, ch. engr.

July 8

†**Oregon**—U. S. Eng., 19 E. Poplar St., Walla Walla, Wash., furnish, install spillway gate levees and appurtenances for McNary Dam on Columbia River, Eng-45-164-49-117, Umatilla Co.

July 12

†**Oregon**—U. S. Eng., Pittock Block, Portland, Zone 5, bank protection works along left bank of McKenzie River at Myers-Dyler location, $1\frac{1}{2}$ mi. east of Springfield, Lane Co. Eng-35-026-49-574.

†**South Dakota**—Bureau Reclamation, Dpt. Interior, Bldg 1-A, Denver Federal Center, Denver, Colo., furnishing, del. f.o.b. cars shipping point or f.o.b. cars Lemmon, one power-operated pedestal type, radial-gate hoist, incl. limit switch and dial indicator, not incl. transmitter and appurtenant parts for Shadehill Dam outlet works, Grand Div., Missouri River Basin Proj. Spec. 2704.

†**Wash., Arlington**—P. Wks. Office, 13 Naval Dist., 1611 W. Wheeler St., Seattle, Jim Creek diversion channel at Naval Communication Station, Spec. 22730.

†**Wyoming**—Bureau Reclamation, Dpt. Interior, Bldg. 1-A, Denver Federal Center, Denver, Colo., furnishing, del. f.o.b. cars shipping point or f.o.b. cars Emery, two 100,000 lb. motor-operated radial-gate hoists, with 2 gate position indicators for spillway at Boysen Dam, Boysen Unit, Spec. 2706.

July 14

†**Oregon**—U. S. Eng., 19 E. Poplar St., Walla Walla, Wash., furnishing, installing 11 lower gate leaves for spillway gates with appurtenances for McNary Dam, Serial No. Eng-45-164-49-117. Extended date. CD 6/10.

LOW BIDDERS

†**California**—U. S. Eng., Wright Bldg., Sacramento, June 17, Burns Creek dam about 18 mi. northeast of Merced, Spec. 1381, from M. J. B. Constr. Co., 322 Elks Bldg., Stockton, **$359,111.** CD 5/25.

†**California**—U. S. Eng., Wright Bldg., Sacramento, June 15, excav. for dam outlet, Isabella Proj., Spec. 1391, from Walsh Constr. Co., 785 Market St., San Francisco, **$323,060.** CD 5/26.

●**Connecticut**—U. S. Eng., Army Base, Boston, 10, Mass., June 22, Mansfield Hollow Dam, Natchaug River, Serial No. Eng. 19-016-29-92, from D. V. Frione & Co., Inc., 87 Foxon Rd., New Haven, **$3,288,814,** Est. $3,546,193. CD 5/25.

†**Illinois**—U. S. Eng., 826 U. S. Court House & Custom House, 1114 Market St., St. Louis, Zone 1, Mo., June 9, levees, East St. Louis, Proj. Item IIA (2), St. Clair Co., Serial No. Eng. 23-065-49-124, from C. T. Wilson Contg. Co., 8024 Forsyth Blvd., Clayton, St. Louis, 24, Mo., **$186,681.** Est. $184,873. CD 5/23—ENR 6/2.

†**Illinois**—U. S. Eng., 826 U. S. Court House and Custom House, 1114 Market St., St. Louis, 1, Mo., June 14, levees, Prairie Du Rocher, Ill. and vicinity, (Edgar Lakes & Prairie Du Rocher and Modoc Drainage and Levee Dists., Randolph Co., Item II-B, Serial No. Eng. 23-065-49-129, from Luhr Bros., Inc., Columbia, **$162,440.** Est. $173,924. CD 6/2.

●†**Illinois**—U. S. Eng., 520 Merchandise Mart, Chicago, Zone 5, June 3, spillway, embankment, outlet works, Farmdale Dam, Farm Creek, Tazewell Co., approx. 4 mi. east of East Peoria, Serial No. Eng. 11032-49-98, from Acme Constr. Co., 5307 Grant St., Cleveland, O., **$1,319,259.** Est. $1,314,603.

†**Illinois and Missouri**—U. S. Eng., Clock Tower Bldg., Rock Island, Ill., June 2, upper approach dikes, Locks and Dams 17 and 22, Mississippi River, Ill., Serial No. Eng. 11-117-49-65, Lock and Dam No. 17, from A. Kertzman Dredging Co., Winona, Minn., **$89,580**; Lock and Dam No. 22, from Ferd J. Robers Co., Burlington, Wis., **$115,975.** CD 5/9.

†**Ind., New Albany**—U. S. Eng., 830 W. Broadway, Louisville, Ky., June 21, New Albany Flood Protection, Sect. 1, Part 2, Serial No. Eng. 15-029-49-142, from Vest & Bartell, 4438 Appleton St., Cincinnati, O. **$947,645.** Est. $1,103,851. CD 6/16.

†**Ky., Newport**—U. S. Eng., 830 W. Broadway, Louisville, June 21, pumping plants, Serial No. Eng. 15-029-49-140, from Vest & Bartell, 4438 Appleton St., Cincinnati, O., **$634,700.** Est. $524,981. CD 5/16.

La., Plaquemine—Iberville Parish Police July, Plaquemine, June 7, approx. 1,247,900 cu. yd. drainage proj., from H. S. Proctor & Co., 2310 Calhoun St., Houston, Tex. **$189,681.** CD 5/18—ENR 5/26.

†**Mass., Fall River**—U. S. Eng., Army Base, Boston, Zone 10, June 14, dredging 1,385,000 cu. yd. Fall River Harbor, Serial No. Eng.-19-016-49-97, from Gahagan Constr. Corp., 90 Broad St., New York, N. Y., **$495,830.** CD 5/23.

†**Missouri**—U. S. Eng., P. O. Box 97, Memphis, Zone 1, Tenn., May 24, approx. 1,110,000 cu. yd. earthwork levee, Dist. 4, Dunklin Co., near Senath and Hargrove, Item L 202 SFR Senath, and Item L 195 SFR Hargrove, Serial No. Eng. 40-041-49-130, from Ace Mining & Contg. Inc., 1021 Pyramid Bldg., Little Rock, Ark., **$197,025.** Est. $201,784. CD 4/29.

†**Missouri**—U. S. Eng., 601 Davidson Bldg., Kansas City, 8, Mo., June 7, cut-off and channel imprvs., Chariton Co. Unit, Chariton River, involving 73 acres clearing and 557,500 cu. yd. excav., Serial No. Eng. 23-028-49-194, from List & Clark Constr. Co., 729 Railway Exchange Bldg., Kansas City, 6, Mo., **$132,540.** Est. $185,871.

†**Missouri**—U. S. Eng., 601 Davidson Bldg., Kansas City 8, Mo., June 17, approx. 10.8 mi. levee embankment, incl. clearing, grubbing, borrow excav., channel excav., drainage structures, stone protection, Agricultural Levee 476-L, left bank Missouri River, Andrew Co., near Amazonia, Serial No. Eng.-23-028-49-218, from Condon-Cunningham Co., 4220 Lafayette Ave., Omaha, Neb., **$861,465.** Est. $783,183. CD 6/25.

†**Nebraska**—U. S. Eng., 601 Davidson Bldg., Kansas City, Mo., June 17, Levee Unit 513-512 R, Sect. II along right bank Missouri River and along both banks Nemaha River south of Rubo, incl. 238,000 cu. yd. common excav., 1,179,000 cu. yd. earth fill, 1,690 lin. ft. 48- to 72-in. corrugated metal pipe, 30 cut-off collars 15 sluice gates, etc. Serial No. Eng-23-028-49-231, from Perry McGlone, 608 Grand Ave., Bank Bldg., Kansas City, Mo., **$604,645.** Est. $489,323. CD 6/14, under LB.

†**N. M., Albuquerque**—U. S. Eng., P. O. Box 1538, rejected bids May 7, Lots 3 and 9, repairing levees and protective works, Middle Rio Grande Conservancy Dist., Eng-29-005-49-94, CD 5/20, under LB.

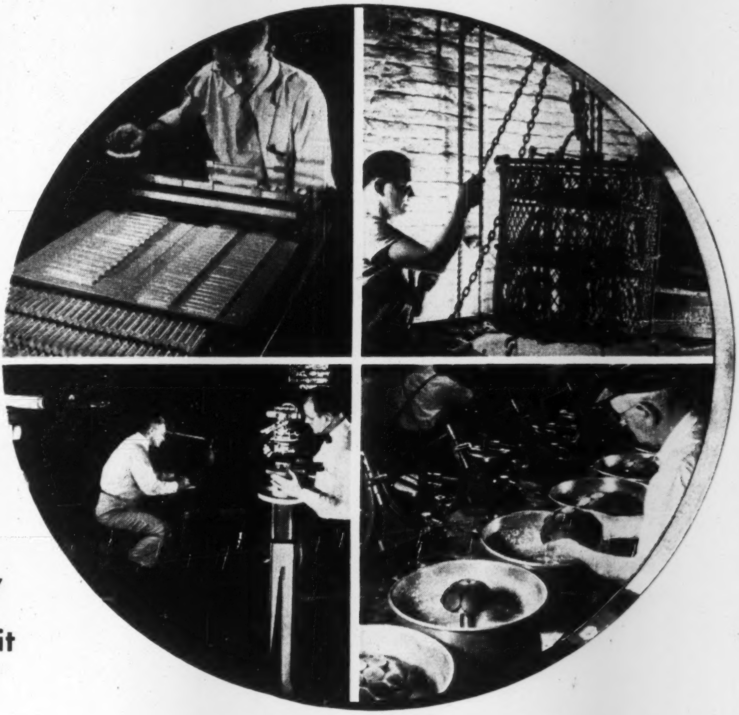
●†**Oregon**—U. S. Eng., 628 Pittock Block, Portland, Zone 5, June 22, furnishing two 70,000 hp. hydraulic turbines, for Detroit Dam on North Santiam River, Marion Co., Serial No. Eng-35-026-49-491, from Baldwin Locomotive Works, Chester Park and Simpson Sts., Phila., Pa., **$1,312,465**; supplying governing equip. for turbines, from Woodward Governor Co., 5001 N. 2 St., Rockford, Ill., **$61,107.** CD 6/3.

Pennsylvania—Dept. Forests & Waters, 404 Education Bldg., Harrisburg, June 21, 3 temporary dams over above Pickering Creek and at the sites of Pawlings and Catfish Dams in River Sect. V of Schuylkill River Desilting Proj., Montgomery Co. and 3 temporary dams in vicinity of Birdsboro and Douglasville, Berks Co. and Pottstown, Montgomery Co. in River Sect. III of Schuylkill River Desilting Proj. from Conduit & Foundation Corp., 770 Schuylkill Ave., Phila., **$427,150** est. $500,000 and **$323,500** est. $500,000, respectively. CD 6/8.

†**Texas**—U. S. Eng., 606 Santa Fe Bldg., Galveston, rejected bids May 19, levee repairs, Dallas County Levee Imprvt. Dist. 2, Trinity River and tributaries, Eng. 41-243-49-285. Will re-advertise. CD 5/11.

†**Texas**—U. S. Eng., 606 Santa Fe Bldg., Galveston, June 8, earth embankment, 500,000 cu. yd. fill for earth and rein.-con. type Belton Dam and Reservoir Proj., Leon River, Inv. No. Eng. 41-243-49-263, from Hunter Constr. Co., Ada, Okla. **$187,583.** Est. $192,270. CD 5/23—ENR 5/26.

(Continued on page 48)



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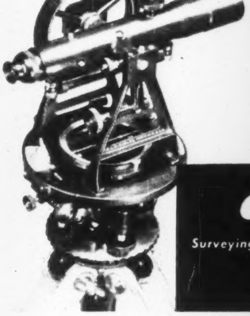

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(Continued from page 46)

CONTRACTS AWARDED

†Louisiana—U. S. Eng., foot Prytania St., New Orleans, repair East Jetty Southwest Pass, Mississippi River, Baton Rouge, to Gulf of Mexico, Serial No. Eng. 16-047-49-274, to Lester F. Alexander Co., Audubon Bldg., New Orleans, **$500,000.** Bids 5/18, awarded 5/19. CD 6/3, under LB.

La., Alexandria—Rapides Parish Police Jury, Alexandria, approx. 1,035,000 cu. yd. channel excav., to Monroe J. Wolfe, 1023 Ridgewood Dr., New Orleans. **$112,298.** Bids 6/8. CD 5/16—ENR 6/2.

†Texas — U. S. Eng., 606 Santa Fe Bldg., Galveston, dredging 2,956,400 cu. yd. from lower end Morgan Point to mouth of Goose Creek Channel, Harris Co., Inv. No. Eng-41-243-49-294, to Atlantic, Gulf & Pacific Co., 15 Park Row, New York, N. Y., **$531,385.** Bids 5/7. CD 6/6, under LB.

●†Tex., Texarkana — U. S. Eng., foot of Prytania St., New Orleans, 9, La., Terrace sect. of Texarkana Dam, Inv. No. 49-281, to Moss Thornton Co., Leeds, Ala., **$2,346,376.** Bids 6/9. CD 6/15, under LB.

●†Virginia—U. S. Eng., foot of Front St., Norfolk, concrete dam Philpott Reservoir Proj., Smith River, Franklin and Henry Counties, Serial No. Eng-44-110-49-18, to Bates & Rogers Constr. Corp., 600 W. Jackson St., Chicago, Ill., Morrison-Knudsen Co., Inc., 122 E. 42 St., New York, N. Y. and Peter Kiewit Sons Co., 1024 Omaha Natl. Bank Bldg., Omaha, Neb., **$6,493,526.** Bids 6/14. CD 6/17, under CA.

†West Virginia—U. S. Eng., Madison Ave. and 8 St. W., Huntington, crest gates, trash chute gate and bulkheads, Bluestone Dam, New River, Eng-46-022-49-10, lots A and C, to The Palmer Bee Co., 1701 Poland Ave., Hamtramck, Mich., **$610,853.** Bids 4/27, awarded 5/27. CD 5/27, under LB.

AIRPORTS AND AIRBASES

BIDS ASKED

July 11

N. Y., Idlewild—SUBSTATIONS FOUNDATIONS—At office Chief Engineer of Port of New York Auth., 111 8th Ave., New York, Zone 11, foundations for primary sub-stations, at New York International Airport, Contr. NYA-94. Plans deposit $25. CD 4/27/44—ENR 5/18/44.

LOW BIDDERS

†Calif., Hayward—HANGAR, etc. — U. S. Eng., 74 New Montgomery St., June 16, hangar and central heating plant for Calif. Air National Guard. Inv. 04-203-49-161, from Utah Constr. Co., 1 Montgomery St., San Francisco, **$727,481.** CD 6/2.

†Ore., Portland —AIRBASE — U. S. Eng., 4735 E. Marginal Way, Seattle, Wash., June 21, rehabilitation Portland Air Force base, repair 80 wooden bldgs., from Waale-Camplan, 2100 S. W. Jefferson St., Portland, **$721,366.** Est. $613,266. CD 6/10.

†Tex., Austin—HOUSING—U. S. Eng., 606 Santa Fe Bldg., Galveston, June 21 ten 2 story masonry, concrete houses, N. C. O. housing, Bergstrom Field, Serial No. Eng. 41-243-49-299, from Lawless & Alford, Box 600, **$840,462.** Est. $1,613,000. CD 5/16.

CONTRACTS AWARDED

Tenn., Knoxville — AIRPORT — City; City Hall, McGhee-Tyson Airport imprvs., to Pittman Constr. Co., 537 Plaster Rd. N.E. Atlanta, Ga., **$119,946.** Bids 5/9. CD 5/16, under LB.

†Tex., Ellington Field—AIRFIELD—U. S. Eng., Ellington Field, rehabilitation 640 bldgs. into radar school facilities to W. S. Bellows Constr. Co., 716 N. Everton St., Houston, **$500,309.** Bids 5/26. CD 6/7, under LB.

†Tex., San Antonio—HOUSING—U. S. Eng., 606 Santa Fe Bldg., Galveston, NCO family housing units, Lackland Air Base, Inv. No. Eng-41-243-49-297, to H. B. Zachry Co., W. Harding Blvd., **$691,631.** Bids 69. CD 6/15, under LB.

FOREIGN

Egypt, Cairo—Ministry of Pub. Wks., Cairo, receiving bids August 29, supply and erection 5 electric pumping stations at Qasabi-Soft. CD 4/28.

LATIN AMERICA

Mexico, Mexico City—Mexican Govt., Sria. de C.Y. O.P., Mexico, D. F., receiving bids August 16, National and International Passenger Station, Mexico City Civil Airport. $325,000. CD 10/17/47—ENR 10/30/47.

PUBLIC BUILDINGS

BIDS ASKED

July 5

Que., Chicoutimi—J. J. O'Sullivan, engr., c/o Central Mortgage & Housing Corp., 1253 McGill College Ave., Montreal, housing, incl. 14 bldgs., Chicoutimi Proj. 2-49. Approx. $360,000. Plans deposit $10.

Que., McMasterville—J. E. M. Desrochers, Town Hall, sewerage sys., for Municipality. $65,000. Plans deposit $25. L. A. Dion, McMasterville, engr.

July 6

Miss., De Kalb—Kemper Co., De Kalb, hospital. Plans deposit $25. L. L. Brasfield, P. O. Box 1065, Meridian, archt.

Man., Flin Flon—J. M. Somerville, secy., c/o Dpt. P. Wks., Hunter Bldg., Ottawa, Ont., public bldg. Approx. $50,000. Plans deposit $50. G. Brault, c/o owner, archt.

Ont., Alliston—G. Adamson, archt., 906 Yonge St., Toronto, 2 story, bsmnt., rein.-con., brick high school, for South Simcoe High School Area Bd., W. G. E. Cumberland secy. Approx. $275,000. CD 1/28/48.

July 7

D. C., Wash.—Dist. Comrs., District Bldg., constructing Pediatric and crippled childrens bldg., Gallinger Municipal Hospital, and installing electric elevators and dumbwaiter. Plans deposit $20. CD 3/29/45.

N. C., Camp Butner—State Hospital, Camp Butner, converted laundry bldg. Plans deposit $15 general. $10 electrical, piping and heating. H. Raymond Weeks, Inc., Durham, archt.

Wis., Menomonie—Bd. Educ., R. L. Pierce, pres., school addn., gymnasium and classroom unit at Central High School, $500,000. Plans deposit $15 each. W. M. Ingeman & M. L. Begstedt, 345 Minnesota St., St. Paul, Minn., archts. CD 12/9/48.

Mo., Jennings (St. Louis, Zone 21, P. O.)—Jennings School Dist., Bd. Educ., Otis A. See, supt Schools, 8831 Cozzens Ave. Jennings, St. Louis, Zone 21, 1 story, bsmnt., brick, concrete, Woodland School addn., alterations, Kinamore and Sunbury Sts. Plans deposit $50. Extended date. P. John Hoener, 3415 S. Kingshighway Blvd., St. Louis, Zone 9, archt. CD 4/27—ENR 5/5.

Va., Hanover—At office Welfare & Institutions Bldg., 429 S. Belvidere St., Richmond, central heating plant and 2 dormitories at Peaks Industrial School. Merrill C. Lee, 110 N. 7 St., Richmond, archt.

July 8

Que., Rouyn—J. J. O'Sullivan, engr., c/o Central Mortgage & Housing Corp., 1253 McGill College Ave., Montreal, 20 duplex houses, incl. 40 units, Rouyn Proj. 1-49, Approx. $250,000. Plans deposit $10. CD 5/19.

About July 9

†Oklahoma—U. S. Eng., P. O. Box 61, Tulsa, Zone 2, project buildings and parking area at site of Tenkiller Ferry Dam on Illinois River, Sequoyah Co., approx. 7 mi. northeast of Gore, and approx. 22 mi. southeast of Muskogee.

About July 11

†N. M., Las Cruces—U. S. Eng., P. O. Box 1538, enlisted men's barracks, White Sands Proving Grounds, Serial No. Eng-29-005-49-295.

July 11

●Ont., Camp Borden and Angus — A. J. E. Smith, engr., c/o Central Mortgage & Housing Corp., 395 Fleet St. W., Toronto, 10 houses, Camp Borden, (D. W. D. Non-Urban) Camp Borden Proj. 2/49, 81 houses, Angus, (D. N. D. Non-Urban) Proj. 3/49, Approx. $710,000, Plans deposit $10; 206 houses (D. N. D. Non-Urban) Proj. Camp Borden 1/49, Approx. $1,380,000. Plans deposit $10.

●Ont., Petawawa—A. J. E. Smith, engr., c/o Central Mortgage & Housing Corp., 395 Fleet St. W., Toronto, 250 houses, N. 1-49. Approx. $1,700,000. Plans deposit $10.

July 12

Ala., Tuscaloosa — University of Alabama, Tuscaloosa, engineering bldg., approx. $250,000. Miller, Martin & Lewis, Title Guarantee Bldg., Birmingham, archts.

Calif., Patton—State Div. Architecture, P. Wks. Bldg., Sacramento, 2 story, part bsmnt., rein. con. 138,000 sq. ft. tuberculosis unit, 1 story, 6,600 sq. ft. rein.-con. ward bldg., at Patton State Hospital. Anson Boyd, Sacramento, state archt. CD 2/28/45—ENR 3/8/45.

Ill., Chicago—Chicago Housing Auth., 343 S. Dearborn St., relocation Housing Site 2, 44 St. and Cicero St., incl. fifty-five 2 story brick bldgs. Friedman, Alschuler, & Sincere and Ernest A. Grunsfeld, Jr., 223 W. Jackson Blvd., archts. CD 12/17.

Miss., Hattiesburg—City, City Hall, Junior High School, Approx. $300,000. Plans deposit $25. N. W. Overstreet & Assoc., 201 N. Lamar St., Jackson, archts.

†N. M., Las Cruces—U. S. Eng., P. O. Box 1538, Albuquerque, heating plant for Missile Assembly Bldg., Serial No. Eng-29-005-49-111. $100,000. CD 6/21.

N. Y., Brooklyn—Bd. Transportation, 250 Hudson St., New York, Zone 13, general contract, plumbing, heating and ventilating, electrical work, elevators and moving stairs of Central Office Bldg., 370-380 Jay St. CD 6/26/47—ENR 7/10/47.

†Montana—Bureau Reclamation, P. O. Box 1245, Fort Peck, Williston Substation, Fort Peck Project, Spec. 2703.

July 14

Ore., Portland—School Dist. 1, 631 N.E. Clackamas St., 9 room wood frame addn. and gymnasium-assembly hall at Glenhaven School. $725,000. Glenn Stanton, Concord Bldg., archt. CD 6/1/44.

†Washington — Bureau Reclamation, Dpt. Interior, Bldg. 1-A, Denver Federal Center, Denver, Colo., furnish, del. f.o.b. cars shipping point or f.o.b. cars Odair, air compressors, and vertical air receivers, for Grand Coulee Power Plant and Grand Coulee Pumping Plant, Columbia Basin Proj., Spec. 2709. L. N. McCellan, ch. engr.

LOW BIDDERS

Conn., New Canaan — Town, Albert F. Mather, supt. Schools, May 18, general contract 2 story, bsmnt., 14 room, brick, steel school, South Ave. and Old Stamford Rd., from Harry Maring, Jr., Inc., 532 Lindley St., Bridgeport. **$534,860.** CD 4/20—ENR 5/12.

●Fla., Jacksonville—City, City Hall, June 9, installing 69 kv. transmission cables and duct lines and cables for 13 kv subtransmission sys. for Power Plant 2, in South Jacksonville, from Harrison-Wright Co. & Assoc., 116 W. 3 St., Charlotte, N. C., **$1,873,000.** CD 5/26.

Ill., Oak Forest—Cook Co., County Bldg., Chicago, June 7, general contract 6 story brick, stone, rein.-con. nurses home, from E. H. Marhoefer Jr. Co., 505 N. LaSalle St., Chicago, **$578,278.** CD 5/27.

†Kan., Fort Riley—U. S. Eng., 1709 Jackson St., Omaha, Neb., June 14, family quarters, Fort Riley, Serial No. Eng., 25-066-49-243, from Mont G. Green, Manhattan. **$509,049.** CD 5/11.

La., Bogalusa — State Hospital Bd., 201 Capitol Annex, Baton Rouge, rejected bids, June 15, Washington St. Tammany Charity Hospital, L.B. **$741,988.** CD 6/21, under L.B.

Minn., Duluth—Bd. Comrs. St. Louis Co. F. W. Johnson, purch. agt., Court House, June 1, general contract 3 story, bsmnt., 42x235 ft. and 40x55 ft. wing, infirmary bldg., from J. D. Harrold Co., 405 E. Superior St., **$541,900.** CD 5/11—ENR 5/19.

New York—Bd. Transportation, 250 Hudson St., New York, Zone 1, general contract Castleton Avenue Bus Garage, Castleton and Jewett Aves., from Atlas Tile & Marble Works, 238 E. 26 St., New York, Zone 10, **$673,909.** CD 5/26.

●N. Y., Brooklyn — Supt. School Buildings, Design & Construction, 49 Flatbush Ave. exten., Zone 1, general contract, plumbing and drainage; heating and ventilating; electrical and lighting fixtures for new Junior High School, 240 Avenue K, E. 29 St. and Nostrand Ave., from Caristo Constr. Co., 26 Court St., Brooklyn, Zone 2. **$2,097,000.** CD 5/19.

O., Bowling Green—Wood County Hospital Assn., Alva Bachman, secy., Bowling Green, June 1, general contract 50-bed county hospital, from Knowlton Constr. Co., 106 N. Main St., Bellefontaine. **$538,600.** CD 5/12—ENR 5/26.

O., Struthers — Bd. Educ., Struthers, rejected bids May 16, memorial gymnasium at high school and modernization, L.B. **$525,442.** CD 5/23, under L.B.

Pa., Harrisburg—Dpt. Property & Supplies, 18 and Herr Sts., June 22, general contract admission bldg., Harrisburg State Hospital, from H. B. Alexander & Son, 315 Vaughn St., Harrisburg, **$794,497.** CD 5/18.

†Pa., Pittsburgh—U. S. Eng., 925 New Federal Bldg., drilling, grouting subsurface area, for Veterans Admin. General Medical Hospital, Serial No. Eng-36-058-49-60, for Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., from Cannon Diamond Drilling Co. Ltd., 1464 W. Compton St., Compton, Calif., **$388,066.** Est. $655,237. CD 4/26.

Tex., Odessa — Ector County Independent School Dist., Odessa, June 16, Masonry Junior High School, concrete slab fdn., incl. 2 boiler-houses, from Gaynor Constr. Co., 3225 Love Field Dr., Dallas, **$702,300.** CD 6/6.

CONTRACTS AWARDED

Conn., Norwich—City, W. J. Barrett, chn. Norwich Housing Auth., 225 Main St., 55 family units and 5 single frame houses, Western Ave., to Zachae Brothers, Talman St. exten., **$523,887.** Bids 6/2. CD 6/8—ENR 6/16, under L.B.

Ga., Atlanta—City, Carnegie Library addn., to Christian & Bell, 664 Spring St. N. W., **$733,825.** Bids 6/13, awarded 6/21. CD 6/17.

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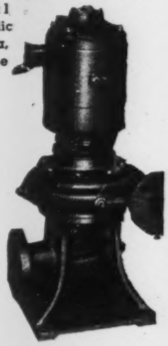

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Ill., Chicago—Chicago Housing Auth., 343 S. Dearborn St., three 7 story brick, rein.-con. bldgs. for housing, Sacramento and Francisco Sts., to George Sollitt Constr. Co., 109 N. Dearborn St., **$963,000.** CD 12/7.

Ill., Urbana—University of Illinois, Urbana, 1 story brick family residences, incl. 30 units, to Kuhne Simmons Co., 1048 Penobscot Bldg., Detroit, 26, Mich., Approx. **$ 05,000.** Skidmore, Owings & Merrill, 100 W. Monroe St., Chicago, archts. CD 12/30/46.

Md., Rockville—Montgomery Co. Bd. Educ., Rockville, five 1 story, 71x138 ft. and 35x44 ft. wing, concrete, brick schools, incl. Viers Mill School, Dahlia and Joseph Mills Rds., Wheaton, Oakland Terrace School and Rolling Terrace School, to Walter B. Avery, 629 F St. N.W., Wash. D. C., **$586,000.** Ronald S. Senseman, 327 Carroll St. N.W., Takoma Park, archt.

N. Y., Elmira—Bd. Educ., City Hall, New School 10, to Welliver Constr. Co., 812 W. First St., **$454,556.** Bids 6/6. CD 4/21—ENR 5/12.

O., Cincinnati—Bd. Educ., 1216 E. 9 St., general contract 2 story, bsmnt., brick South Avondale School, remodel Junior High Shcool, to Ferro Concrete Constr. Co., 203 W. 3 St. **$937,848.** Bids 6/10, awarded 6/19. CD 5/19.

O., Geneva—Geneva Memorial Hospital, 199 S. Eagle St., 2 story 26 bed, brick, steel general hospital, to Alger Rau Co., 12434 Cedar Ave., Cleveland Heights. Approx. **$400,000.** Bids 6/7. CD 5/27.

Okla., Norman—Bd. Affairs, Capitol Bldg., Oklahoma City, Zone 5, hospital dining room, kitchen and altering 3 womens wards, to Manhattan Constr. Co., First Natl. Bldg., Oklahoma City, Zone 2, **$657,929.** Est. $600,000. Bids 4/8. CD 4/13—ENR 4/21, under LB.

Tex., Longview — Gregg Co., Longview, hospital, to J. A. Sharrock & Sons, Marshall, **$641,818.** Bids 5/25. CD 6/3, under LB.

Tex., Lubbock—Lubbock Co., Courthouse, 1 story, steel frame courthouse, to Robert McKee, Box 2848 Dallas, **$840,000.** CD 6/20, under LB.

†Va., Warrenton—U. S. Eng., First and Douglas Sts. N. W., Wash. 25, D. C., family quarters at Vint Hill Farms, near here, Serial No. 49-080-49-124 (29) M, to William T. Lyons, Tower Bldg., Baltimore, Md., **$518,605.** Bids 5/26, CD 6/3, under LB.

COMMERCIAL BUILDINGS

BIDS ASKED

July 5

Colo., Craig—Memorial Hospital Bd., c/o Bldg. Comn., Craig, 1 story, part bsmnt., 25 bed hospital, $301,000. Walter H. Simon, 1932 E. 18 Ave., Denver, archt. and engr. CD 2/19/48.

July 6

Mo., Concordia—Carroll & Dean, archts., 810 Temple Bldg., Kansas City, Mo., 3 story, bsmnt., 58x123 ft. rein-con., brick, administration bldg., 22x35 ft. wing, 32x32 ft. boiler house attached to gymnasium, for St. Pauls College, Bd. Control, Concordia, $425,000. CD 10/29.

July 8

Tex., Austin—Franciscan Missionary Society, c/o Most Rev. C. E. Byrne, Bishop of Galveston, 1402 Broadway, Galveston, 1 story, bsmnt. 50 bed masonry hospital, air-conditioning. Approx. $500,000. R. M. Krause, P. O. Box 2634, Houston, engr. CD 5/15/47—ENR 5/22/47.

Bids Asked

Ill., Chicago—St. Anne and St. Joseph Parish, c/o Thomas Edward Cooke, archt., 228 N. LaSalle St., 3 story, brick, concrete, steel school.

Ind., Indianapolis—G. C. Murphy Co., H. E. Crosby, vice pres. constr. div., 531 5 Ave., McKeesport, Pa., (selected list bidders) 1 story, bsmnt., 54x130 and 48x74 ft. L-shaped, brick, steel, rein.-con. store, College and Broad Ripple Aves. $250,000. R. V. Harkless, c/o owner, archt.

SOON LETS CONTRACT

Ill., Chicago — St. Gertrude Parish, 1420 Granville Ave., soon lets contract 2 story bsmnt., brick, steel stone school. Frederick Stanton, 307 N. Michigan Ave., archt.

Ky., Covington—Booth Memorial Hospital, 323 W. 2 St., soon lets contract 3 story brick hospital addn., air-conditioning, $295,000. Extended date. E. O. & G. T. Landberg, 114 N. Garfield, Pl., Cincinnati, O., archts. CD 12/15.

Md., Baltimore—Baltimore Federal Savings & Loan Co., 19 E. Fayette St., soon lets contract 4 story, 79x110 ft., concrete, steel, limestone, brick office. Hall, Bordeu & Donaldson, 2211 N. Charles St., archts. CD 6/10.

LOW BIDDERS

Calif., Los Angeles—University of Southern California, 3551 University Ave., June 17, 2 story, brick, concrete cafeteria bldg., from Louis C. Dunn Co., Subway Terminal Bldg., Los Angeles, **$150,950.** CD 5/25.

Que., Montreal—Bank Canadian National, Place'd Armes, 5 story, 50x100 ft. rein.-con. bank, from D. Boileau Ltd., 705 Beaumont St., **$750,000.** J. J. Perrault, 3737 Van Horne Ave., archt.

CONTRACTS AWARDED

Calif., San Mateo—San Mateo Investment Co., 2500 S. El Camino Real, 26,000 sq. ft. frame, plate glass, & brick super market with 55 ft. tower, parking lot, to Peninsula Home Builders, 25 and El Camino Real. Approx. **$500,000.**

Conn., Hartford—Phoenix Fire Insurance Co., 30 Trinity St., brick, steel, concrete office, Asylum Ave. and Woodland St., to Robert Glenn Builders, Inc., 721 Main St., Approx. **$750,000.** O'Connor & Kilham, 101 Park Ave., New York, N. Y., archts. CD 1/19.

Conn., Windsor—Misky-Mumford Co., Park Acres, 75 single frame houses, Park and Matianuck Aves. and Park Lane, Owner biulds, **$750,000.** CD 6/21.

Fla., St. Petersburg—Woodlawn Properties, Inc., c/o Roy B. Tudeen, 1941 18 Ave. S., St. Petersburg, 66 apartment units, Owner builds. **$440,000.**

●Ga., Columbus—Battle Park Homes, c/o contractor, 200 housing units, to Jordan Contg Co., Andrews Rd., Columbus, Approx. **$1,'00,000.**

●La., New Orleans—De Paul Sanitarium, Sister Ann, administrator, 1038 Henry Clay Ave., 5 story De Paul Sanitarium, to R. P. Farnsworth & Co. Inc., 1515 S. Salcedo St., **$1,047,000.** Bids 5/24. CD 6/1, under LB.

La., New Orleans — General Enterprises, Inc., c/o contractor, office, to Keller Constr. Corp., 7900 Palm St. Approx. **$500,000.**

Md., Silver Spring — Oxon Terrace No. 2, Southern Bldg. Wash., D. C., six 3 story brick, concrete apartments, incl. 222 units, to Paul T. Stone, 927 15 St. N. W., Wash. D. C. Edwin Weihe & Katherin Gibbs, 927 15 St. N. W. Wash., D. C. archts.

N. Y., Gouverneur—Edward J. Noble Hospital, Gouverneur, hospital, to John Rouse Constr. Co., Gouverneur, and Hawley & Putnam Co., Potsdam, **$886,886.** Bids 5/14. CD 4/26.

N. Y., Jackson Heights—Woodstock House, Inc., c/o Phillip Bernbaum, archt., 303 W. 42 St., New York, Zone 18, 6 story apartment, 35 Ave. between 81 and 82 Sts., Owner builds, **$550,000.** CD 4/27.

●O., Cincinnati — Royal Jackson, Inc., Galbraith Rd., N. College, Hill, one hundred eighty-eight 1½ story, bsmnt., brick residences., separate contracts, **$2,256,000.**

O., Parma—M & S Builders, Inc., 35-15 Severn St., Cleveland Heights, sixty-four 1½ story, bsmnt., frame homes, 8300 to 8383 Chesterfield Ave., separate contracts. **$576,000.**

S. C., Greenwood—Greenwood Mills, Greenwood, 100 new homes in Harris Plant village. Owner builds. Approx. **$500,000.**

●Tenn., Memphis—Sherwood Building Corp., c/o contractor, residential development; to Herbert Morton Inc., P. O. Box 68 Normal Station, Memphis, Approx. **$1,000,000.**

Tex., Houston—H. R. Houck & Assoc., 2800 Bellfontaine St., 60 dwellings, Braes Heights area., force account. **$800,000.** CD 3/18/47.

Utah, Kearns—Kearns Townsite, Inc., c/o S. D. Caplan, mgr., Kearns, 100 residential homes, to Bishop & Biessinger, 711 Jepson Ave., Salt Lake City, Approx. **$700,000.** Fred Markham, Provo, archt.

Wash., Spokane—Crescent Department Store, Wall St. and Main Ave., 7 story, rein-con. store addn., to Henry George & Sons, Hutton Bldg., Approx. **$500,000.**

Wis., Milwaukee—Line Material Co., 800 N. 8 St., Zone 3, 2 story, bsmnt. 100x150 ft. steel office, concrete fdn. and floors, to Selzer-Ornst Co., 6222 W. State St., Wauwatosa, Zone 13. Est. **$400,000.** M. W. Meyer & Assoc., 424 E. Wells St., Zone 2, archts.

●Alaska, Anchorage—Pacific Alaska Development Corp. c/o Lewis Constr. Co., Lowman Bldg., Seattle, Wash., 2 story, bsmnt., frame houses, concrete fdns., incl. 682 units, to Lewis Constr. Co., Lowman Bldg., Seattle Zone 4, Wash., Approx. **$12,000,000.** CD 11/5.

INDUSTRIAL BUILDINGS

BIDS ASKED

July 5

Ont., London—FACTORY—M. M. Dillon & Co., engrs., Bank of Toronto Chambers, 2 story, 45x80 ft. and 1 story, 80x375 ft. steel, rein.-con. factory, exten., 745 York St., for Gair Co. Canada Ltd., 745 York St., R. L. Stephenson, mgr. Approx. $400,000. CD 5/13.

July 7

Fla., Miami—PLANT, etc.—McArthur Jersey Dairy Farm, c/o Robert Fitch Smith, 201 Shoreland Bldg., dairy plant and garage, Approx. $68,000.

SOON LETS CONTRACT

Calif., Redding—BOTTLING PLANT, etc.—Coca-Cola Bottling Co., 1500 Mission St., San Francisco, soon lets contract 1 story, part rein.-con., concrete part frame and steel bottling plant, warehouses, office and garage, $150,000. Albert F. Roller, 1 Montgomery St., San Francisco, archt. CD 6/18/47.

●N. M., Lovington—GENERATOR UNITS—Lea County Electric Co-operative, Inc., Lovington, soon lets contract diesel engine generator units, auxiliary equip., piping. $1,250,000. Continental Engineers, 1310 Avenue Q, Lubbock, archts. and engrs. CD 4/22.

Tenn., Athens—PLANT—Athens Table Co., c/o Wm. A. Martin, archt., James Bldg., Chattanooga, soon lets contract plant addn.

Tenn., Lafayette—WAREHOUSE, etc.—Tri-County Electric Membership Corp., Lafayette, soon lets contract warehouse and office. $100,000. Hart & McBryde, Cotton States Bldg., Nashville, archts.

CONTRACTS AWARDED

●Calif., East Los Angeles — PLANT, etc. — Crown Zellerbach Corp., 910 E. 61 St., Los Angeles, plant and office, to H. C. Smith Co., 718 E. 16 St., Los Angeles, Approx. **$1,500,000.** The Austin Co., 777 E. Washington Blvd., Los Angeles, archt.

N. J., Linden—PLANT—Great Lakes Carbon Corp., 18 E. 48 St., New York, N. Y., permalite plant on 3 acre site, to Blaw-Knox Constr. Co., (Chemical Plants Div.) Farmers Bank Bldg., Pittsburgh, Pa.

●Tenn., Jackson—PLANT—Aluminum Foils, Inc., c/o contractor, mfg. plant, to Foster & Creighton Co., American Natl. Bank Bldg., Nashville. Approx. **$1,000,000.** CD 11/5/48.

Que., Montreal — PLANT — Molson Brewery Ltd., 1678 Notre Dame St., E., 8 story, 58x136x170 ft. superstructure, cellars bldg., to E. G. M. Cape & Co., 620 Cathcart St., **$550,000.** CD 1/19.

UNCLASSIFIED

BIDS ASKED

About July 5

Missouri—RURAL DISTRIBUTION LINES—Black River Electric Co-operative, Ironton, 251 mi. rural distr. lines, 51 mi. transmission lines, E Sect. of system, Reynolds Co. and vicinity. Frank Horton & Co., Lamar, engrs. CD 5/20—ENR 6/9.

North Dakota — RURAL DISTRIBUTION LINES—L. S. R. Electric Co-operative, Milnor, labor for 204.55 mi. rural distr. lines, Richland and Sargent Counties, $75,000. Ulteig Eng. Corp., 114½ Front St., Fargo, engrs.

July 6

†Wyoming—TRANSMISSION LINE—Bureau Reclamation, Dpt. Interior, Cody, Boysen-Thermopolis 115 kv. transmission line, Missouri River Basin Proj. Spec. 2693.

Que., Grandes Bergeronnes—WHARF—J. M. Somerville, secy., c/o Dpt. P. Wks., Hunter Bldg., Ottawa, Ont., wharf extens. Approx. $53,000. Plans deposit $20. R. Blais, c/o owner, engr.

July 7

Ill., Chicago—SUBWAY—City of Chicago, Dpt. Purchases, Contracts & Supplies, City Hall, installing traction power dist., and control equip., Dearborn St. Subway, Contr. T-12, Plans deposit $40, CD 4/26/45—ENR 5/17/45.

Missouri—RURAL DISTRIBUTION LINES—Black River Electric Co-operative, Ironton, 178.5 mi. rural distr. line, conversion 7.5 mi. lines, Madison, Bollinger and Wayne Counties, $190,000. Frank Horton & Co., Lamar, engrs. CD 6/14.

N. Y., New York—PIER—Comr. Marine and Aviation, Pier A, North River, foot of Battery Pl., Zone 4, Contr. 2671, rehabilitation of columns, foundations and exterior of Pier and Piershed 51, foot of Jane St., North River, Manhattan Boro. Plans deposit $4.

Wash., Walla Walla—FISH HATCHERY—State Dpt. Game, Smith Tower, Seattle, Zone 4, 40 trough fish hatchery on Tucannon River northeast of here. Bids 6/9 rejected, L. B. **$88,308.** CD 6/15, under LB.

July 8

†La., New Orleans — AIR-CONDITIONING SYSTEM—U. S. Eng., foot Prytania St., installing 175 ton, summer air-conditioning sys. in engineering bldgs., Serial No. Eng. 16-047-49-340.

July 11

Iowa—RURAL DISTRIBUTION LINES—Nishnabotna Valley Rural Electric Co-operative, Harlan, 146 mi. rural distr. lines, Shelby and Pottawattamie Counties, $150,000. Henningson Eng. Co., Standard Oil Bldg., Omaha, Neb., engr. CD 4/1.

Neb., Nebraska City—GAS LINE—City, Ethel Gaskill, clk., Nebraska City, natural gas line from city northwest 23.5 mi. to lines of the Natural Gas Co. of America. $52,000. Henningson Eng. Co., Standard Oil Bldg., Omaha, engr.

July 12

Calif., Cedarville—ELECTRICAL DISTRIBUTION SYSTEM, etc.—State Div. Architecture, P. Wks. Bldg., Sacramento, electrical distr. sys. and parking area floodlighting sys. for 34th District Agricultural Assn. Anson Boyd, state archt.

Calif., Fresno—UNDERGROUND DISTRIBUTION SYSTEM, etc.—State div. Architecture, P. Wks. Bldg., Sacramento, underground distr. sys. and illumination sys. for 21st District Agricultural Assn. Anson Boyd, state archt.

Calif., San Fernando—LIGHTING SYSTEM—State Div. Architecture, P. Wks. Bldg., Sacramento, lighting sys. for Horse Show Arena, 51st District Agricultural Assn., Anson Boyd, state archt.

Bids Asked

R. I., Exeter—UTILITIES—State, F. A. Adams, State Office Bldg., Providence, utilities, underground steam mains and other utilities, Exeter State School (Feeble Minded) $150,000. Hayden, Harding & Buchanan, 826 Park Square Bldg., Boston, Mass., engrs. CD 2/10, under Public Buildings.

LOW BIDDERS

Alabama—RURAL DISTRIBUTION LINES—Pea River Electric Corp., Clayton, June 9, 254 mi. rural distr. lines, Barbour, Dale and Henry Counties, from G. R. Wood, 711 Virginia St., Mobile, **$242,841.** CD 5/24.

†Arizona and Nevada — TRANSMISSION LINE TOWERS, etc.—Bureau Reclamation, Dpt. Interior, Phoenix, Ariz., June 16, foundations and erecting steel towers for Mesa-Coolidge 230 kw transmission line, Davis Dam Proj., Spec. 2670, from Ferd Drayer, Oakland, Calif., **$198,612.** CD 5/24.

Georgia—RURAL DISTRIBUTION LINES—Slash Pine Electric Membership Corp., Homerville, 190.3 mi. rural distr. lines Clinch, Echols, Ware and Lanier Counties, from Keadle Bros. Co., Camilla. **$187,916.** CD 5/27.

†N. M., Albuquerque—GAS SUPPLY LINE—U. S. Eng., P. O. Box 1538, June 15, gas supply line, Sandia Base, Serial No. 291-49-102, from Western Constr. Co., Albuquerque, **$159,837.** Est. $50,000. CD 6/8.

†N. M., Albuquerque—RECREATION CENTER—U. S. Eng., P. O. Box 1538, June 11 recreation and playground proj., Sandia Base, Serial No. 291-49-97, from Lembke Constr. Co., Albuquerque, **$355,259.**

†Oklahoma—GOVERNING EQUIPMENT—U. S. Eng., P. O. Box 61, June 3, 4 sets hydraulic turbine governing equip. for Fort Gibson Dam, Muskogee Co., from Woodward Governor Co., 5001 N. 2 St., Rockford, Ill., **$117,943.** Est. $125,000. CD 5/18.

Texas—RURAL DISTRIBUTION LINES—Comanche County Electric Co-operative, Inc., Comanche, June 7, approx. 225 mi. rural distr. lines, Erath, Mills, Callahan, Comanche, Hamilton, Eastland and Brown Counties, from B-Line Constr. Co., 520 1st Natl. Bank Bldg., Oklahoma City, Okla., **$247,718.** Est. $250,000. CD 6/1.

Ont., Toronto—SWIMMING POOL—Municipality, rejected bids June 10, swimming pool, Bloor Collagiate L. B. **$146,560.** Est. $85,000. CD 6/3.

CONTRACTS AWARDED

●Ill., Chicago—SUBWAY—City of Chicago, Dp. Purchases Contracts & Supplies, City Hall, Dearborn St. Subway, Contr. F-4, to M. J. Boyle & Co., 2480 N. Elston Ave., **$1,196,683.** Bids 5/5. CD 5/10, under LB.

Ia., Sioux City—ELECTRICAL DISTRIBUTION SYSTEM—Sioux City Gas & Electric Co., 517 5 St., Sioux City, rebuilding underground electrical distr. sys., day labor. **$500,000.**

Kansas—RURAL DISTRIBUTION LINES—Flint Hills Rural Electric Co-operative Assn., Inc., O. E. Mebrey, mgr., Council Groves, labor only, 340.83 mi. rural distr. lines, 33.5 mi. conversion lines, Geary, Morris, Dickinson, Chase, Marion, and McPherson Counties, Proj. Kansas 27 L, Morris, to Pendleton Constr. Co., Oklahoma City, Okla., **$147,914.** Bids 4/12. CD 5/4—ENR 5/5.

Nebraska—RURAL DISTRIBUTION LINES—Eastern Nebraska Public Power Dist., Syracuse, 204 mi. rural distr. lines, Otoe, Nemaha, Johnson, Lancaster and Case Counties, to Davidson & Ford, 3424 N. 60 St., Omaha, **$249,079.** Bids 6/13. CD 5/27.

Oklahoma—RURAL DISTRIBUTION LINES—Oklahoma Electric Co-operative, Inc., 316 E. Main St., Norman, 113 mi. rural distr. lines, Cleveland Co., to R. S. Bowie Constr. Co., P. O. Box 64, Walters, labor **$54,344,** materials **$113,000,** total. $167,344. CD 2/28.

Oklahoma—RURAL DISTRIBUTION LINES—Southeastern Electric Co-operative, Durant, 248.9 mi. rural distr. lines, Bryan Co., to Central States Constr. Corp., Higginsville, Mo., **$379,494.** E. R. Taylor & Assoc., 4107 A. E. 11 St., Tulsa Zone 4, engrs. CD 2/10/47.

Okla., Elk City—LOADING RACKS—Shell Pipe Line Corp Bldg., Mayo Bldg., Tulsa, loading racks gathering lines in Elk City fields, 5 mi. delivery line pumping line unit, own forces. Approx. **$100,000.** CD 4/20.

Tennessee—RURAL DISTRIBUTION LINES—Appalachian Electric Co-operative, Jefferson City, 250 mi. rural distr. lines, Jefferson, Grainger, Cocke, Hamblen and Sevier Counties, to Irby Constr. Co., 815 S. State St., Jackson, Miss., **$300,000.** CD 12/27.

Texas — RURAL DISTRIBUTION LINES — Karnes Electric Co-operative, Inc., P. O. Box 247, Karnes, 159.5 mi. rural distr. lines, Karnes Co., to Mid-State Constr. Co., Columbia, Tenn., labor **$33,280,** material **$160,000,** total $193,280. CD 2/11.

Virginia—RURAL DISTRIBUTION LINES—BARC Electric Co-operative, Millboro, 18.3 mi. rural distr. lines, Bath Co., to Cofer Constr. Co., 38 Wells Ave. N. E., Roanoke, **$114,313.** CD 8/12/48.

Washington — RURAL DISTRIBUTION LINES — Nespelem Valley Co-operative, Inc., Nespelem, 156.16 mi. rural distr. lines, Nespelem Co., to Reither Constr. Co., Aitkin, Minn., labor **$94,335,** material **$156,000,** total $250,335. H. A. Sewell, Newport, Wash., engr. CD 10/15/48, under LB.

Quebec — HYDRO ELECTRIC DEVELOPMENT—Pembroke Electric Light Co. Ltd., 283 Pembroke St. E., Pembroke, hydro electric development, Black River, near Waltham, to Newton Constr. Co. Ltd., 150 Victoria St., Sherbrooke Approx. **$150,000.** H. G. Acres & Co., 2135 Culp St., Niagara Falls, Ont., engrs.

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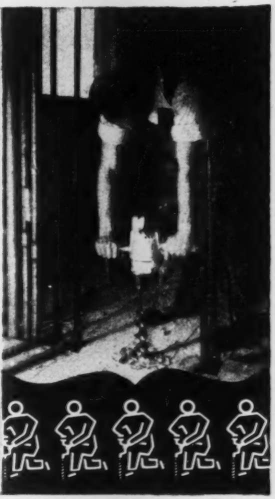

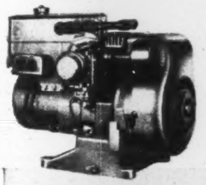

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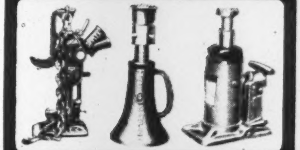

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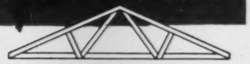

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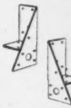

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CONSTRUCTION REPORTS—Third Section

WATER SUPPLY

BIDS ASKED

July 5

Pa., North East—North East Boro, sluice gates, valves, pipe and fittings, mixer equip., filter equip., construct 2 rein.-con. filter beds, replacing and connecting new heating boiler, oil storage and adding 2 radiators. Plans deposit $10. Hill & Hill, 24 E. Main St., engrs.

July 6

La., New Orleans—Sewerage & Water Bd. of New Orleans, 526 Carondelet St., watermains, Contrs 292-W, 293-W, 294-W and 295-W.

Sask., Unity—R. J. Delley, municipality clk., watermains, concrete storage tanks; pump. station. Plans deposit $10. Underwood & McLellan, 502 Grain Bldg., Saskatoon, engr.

July 11

Pa., Phila.—Dpt. P. Wks., City Hall Annex, Contr. 1174, Queen Lane Pumping Station repairs. Approx. $28,000. Elber & J. Taylor, Water Bureau Chief. CD 3/11/46.

July 12

†Ore., Troutdale—U. S. Eng., Pittock Block, Portland, Zone 5, water supply well for North Pacific Division Testing Laboratory, Eng-35-026-49-579.

Tex., Morton—City, WW sys. imprvs., extens. $65,000. Plans deposit $15. Joe E. Ward, 545 Nacol Bldg., Wichita Falls, engr.

Tex., Waxahachie—City, drilling, casing, developing water supply well. Approx. $35,000. T. C. Forrest, Jr., Praetorian Bldg., Dallas, engr. CD 3/30.

July 28

Tex., Houston—City, M. H. Westerman, secy., City Hall, 900 Brazos St., 5 water supply wells, Nineteenth and Nicholson Pump Station zone, $150,000; 2 water supply wells, northeast sect. of city, $55,000; L. Fugate, city engr. CD 6/14.

August 19

Tex., Smithville—City, c.i. waterline extens. $100,000. Garrett Eng. Co., 5008 Almeda Rd., Houston, engr. CD 4/28.

LOW BIDDERS

Calif., Brawley—City, June 20, 4 water storage reservoirs, from R. R. Slaughter & E. C. Young, Box 228, Julian, **$207,437.** Est. $240,000. CD 5/26.

Calif., Santa Rosa—City, City Hall, June 21, 12 in. watermains, from Arthur B. Siri, 1357 Cleveland Ave., **$36,127.**

Conn., Hartford—Metropolitan Dist., Water Bureau, 650 Main St., June 16, water sys., 2 rein.-con. covered reservoirs, Contr. 156, Wickham Hill, from American Constr. Co., 100 Airport Rd., Hartford, **$264,667.** CD 6/2.

Tex., Galena Park—City, water supply well, from Texas Water Wells, Inc., 951 McCarty St., Houston, **$31,300.** Wyatt C. Hedric 5201 & Co., 401 N. 63 St., Wauwatosa, Zone 13,

Tex., Houston—City, City Hall, 900 Brazos St., June 23, Heights Water Pumping Station and related constr., from Leo Linbeck Constr. Co., 1350 Peden St., **$433,750.** CD 6/7.

CONTRACTS AWARDED

Miss., Natchez—Mississippi Power & Light Co., c/o contractor, drilling water well, to supply steam electric generating station, to Layne Central Co., Millsaps Bldg., Jackson, **$65,000.**

Tex., Edna—City, 1,500 ft. water supply well, to Henry Clevelens, Edna, **$31,000.** Awarded 6/21.

Tex., Hemphill—City, water treatment plant and line extens., to Roy M. Mitchell, 2700 Malcolm St., Shreveport, La., **$96,000.** Bids 6/17. Garrett Eng. Co., 1806 Milam St., Houston, engr.

Tex., Houston—G. Faith & J. D. Seay, 6528 Harrisburg Blvd., c.i. waterlines, own forces. **$32,000.**

Wis., Milwaukee—City, chlorinating equip. for water purification plant, to Wm. Faust & Co., 401 N. 63 St., Wauwatosa, Zone 13, **$27,960.** Bids 6/21. CD 6/8.

Alta., Athabasca—Municipality, rehabilitation WW sys., to Poole Constr. Co. Ltd., 218 Tegler Bldg., Edmonton, **$90,000.** Bids 2/16. CD 2/7.

SEWERS, WASTE DISPOSAL

BIDS ASKED

July 4

Que., Montreal—Exec. Comn., City Hall, sewers in Borden and Ridgeway Aves., Lemieux, Snowden and Waveryly Sts. Plans deposit $10. H. A. Gibeau, city engr.

July 6

Ark., Arkadelphia—City Sewer Com., Arkadelphia, addnl. main and lateral sewer lines and replacing, repairing sewer lines. Plans deposit $25. Frank A. Gerig, Arkadelphia, engr. CD 3/19.

La., New Orleans—Sewerage & Water Bd., 526 Carondelet St., sanitary sewers, Contr. 193-S 194-S.

Sask., Unity—R. J. Delley, municipality clk., sewers, sewage pump. station, disposal plant. Underwood & McLellan, 502 Grain Bldg., Saskatoon, engr.

July 8

Fla., Pensacola—City, 10 mi. sanitary sewers and sewage pump. station. Extended date. CD 6/22.

July 11

Mo., Caruthersville—City, W D. Byrd, mayor, and Viola Kramer, city clk., City Hall, sewerage imprvs., Contr. 5. Black & Veatch, 4706 Broadway, Kansas City, Mo., engrs. CD 11/12/47.

July 14

Okla., Poteau—City, sanitary sewer mains, sewage disposal plant, $80,000. C. H. Guernsey & Co., 1414 N. Robinson St., Oklahoma City, engrs. CD 11/22.

July 15

Ill., Peoria—Greater Peoria Sanitary Dist., foot of Darst St., 27,500 lin. ft. 8- to 15-in. sanitary sewers, Proj. 7SD $175,600. Plans deposit $10.

July 18

Calif., Stockton—City, City Hall, trunk line sanitary sewer from No. Sewage Disposal Plant across Smith Canal and in and along Ryte Ave. and Mt Diablo Ave. Approx. $50,000. Plans deposit $5. H. M. Dunlap, City Hall, city engr. CD 10/16/45.

July 19

Calif., Los Angeles—Bd. Supervs. Los Angeles Co., 501 Hall of Records, approx. 3 mi. 8 in. vitr. clay sanitary sewers in 16 St. $77,290. C. E. Arnold, co. engr.

August 19

Tex., Smithville—City, sanitary sewerage sys. treatment plant. $200,000. Garrett Eng. Co., 5008 Almeda Rd., Houston, engr. CD 4/28.

LOW BIDDERS

Ark., Marion—City, June 15, sewerage sys. from E. W. Daniel Plumbing & Heating Co., 1418 W. 9 St., North Little Rock, **$89,453.** CD 5/11.

Calif., Oakland—City, City Hall, June 21, sanitary sewers in Gouldin and Aspinwall Rds., Alhambra Ave., Westwood Way and Westwood Court, from Oakland Sewer Constr. Co., 9915 Walnut St., **$62,454.** CD 6/7.

Calif., Santa Ana—City Bd. Trustees, City Hall, June 20, storm drain in Delhi Rd., Flower to Main Sts., from Artukovich Bros., 7320 N. Atlantic St., Paramount, **$53,224.**

Mass., Boston—Commonwealth of Mass., Metropolitan Dist. Commrs., 20 Somerset St., rejected bids June 2, furnishing, installing sewerage pump. equip., Deer Island, Pumping Station, Contr. 133. CD 5/12.

Mo., North Kansas City (Kansas City P. O.)—City, City Hall, June 10, Sect. 1, sewers, from C. S. Foreman Co., 1221 Baltimore Ave., Kansas City, Mo., **$331,742;** Sect. 2, pumping station, from L. G. Barcus & Sons, 1430 State St., Kansas City, Kan., **$114,700.**

Tex., San Antonio—City, City Hall, June 23, Salado Creek Sewer Main Sect. 2, 13,360 lin. ft. 54 and 60 in. gravity sewer pipe, manholes, earth fill, culverts, from McKenzie Constr. Co., 2800 Transit Tower, **$201,940** est. $239,000. Salado Creek Sewer Main Sect. 3, 19,450 lin. ft. 48 and 54 in. gravity sewer pipe, manholes, earth fill, culverts, from Colglazier & Hoff, P. O. Box 6538, **$207,003** est. $275,500. CD 6/7.

CONTRACTS AWARDED

La., New Orleans—New Orleans Sewerage & Water Bd., 526 Carondelet St., concrete lined and covered canal, Florida Ave., to Bernard & Byrd, Inc., Interstate Bldg., **$805,137.** Bids 5/4, awarded 6/9. CD 5/10.

Minn., Fairmont—City, S. Stewart, clk., City Hall, furnishing sewer pipe, to Concrete Products Corp., Humboldt, Ia., **$79,710;** constructing storm sewers, to Welch & Welch, Hopkins, **$58,082.** Bids 6/14. W. T. Thatcher, city engr.

Tex., Houston—G. Faith & J. D. Seay, 6528 Harrisburg Blvd., sanitary sewers, own forces. Approx. **$50,000.**

Tex., Houston—Southern Oaks, Inc. and Duffy Realty Co., 2517 University St., sanitary and storm sewers, in Southern Oaks area vicinity of Brays Bayou, to Texala Constr. Co., 8210 Stedman St., **$75,000.** Est. $85,000. CD 6/6.

BRIDGES

BIDS ASKED

STATE HIGHWAY LETTINGS

July 8
Kansas
July 13
California
New York
July 14
California

July 19
Maryland
July 21
California
Maryland
July 26
Maryland

July 11

Calif., San Diego—Bd. Supervs., San Diego Co., Civic Center Bldg., rein-con. girder bridge, approx. $100,000. Bids 6/31, rejected. Warren Barney, co. engr. CD 5/23.

Tex., Canton—Van Zandt Co., Leon Cox, judge, Canton, 2 treated timber vehicle bridges across Kickapoo Creek on Road 420 and road work, $55,000.

July 13

La., Thibodaux — Lafourche Parish Police Jury, Thibodaux, general repair and reconstruction, St. John Bridge, Thibodaux-Napoleanville Hy., Valentine Bridge, Lockport, Larose, Cut Off Bridge, Cut Off, and Galiano Bridge Cut Off.

July 26

Mo., St. Louis—City, Frank J. McDevitt, pres., Bd. P. Service, 304 City Hall, 12 and Market Sts., Zone 3, furnishing, framing, treating, etc., bridge timbers, railway deck Douglas MacArthur Bridge across Mississippi River, between St. Louis, Mo., and E. St. Louis, Ill., $112,000. Dpt. P. Utilities, Conway B. Briscoe, dir., 311 City Hall, engr. CD 3/17/48.

LOW BIDDERS

California—State Div. Hys., Sacramento, June 22, wid'n 4 rein.-con. bridges and exten. 92 box and pipe culverts between Putah Creek and Colusa Co. line, Yolo Co., from Grant L. Miner, 62 Ecino Ave., Palo Alto, **$139,846.** CD 6/1.

Illinois—State Hy Dpt., Springfield, June 24, structural steel, railroad overhead and grade separation, U. S. Rt. 40, from American Bridge Co., 208 S. LaSalle St., Chicago, Zone 4, **$50,646;** substructure and erect structural steel railroad overhead, structure for grade separation U. S. Rt. 40, from Zimmerly Constr. Co., 21 E. Edgar St. Paris, **$145,128,** both Cumberland Co. CD 6/15.

Maine—State Hy Comn., Augusta, June 22, steel superstructure, Penobscot River bridge between Lincoln and Chester, Penobscot Co., from Lackawanna Steel Constr. Co., Walden Ave., Cheektowaga, Buffalo, N. Y., **$117,823.** CD 6/23.

●Massachusetts—Commonwealth of Massachusetts, Dpt. P. Wks., 100 Nashua St., Boston, June 21, steel superstructure U 331 (8), Gloucester, from Bethlehem Steel Co., 75 Federal St., Boston, **$1,232,480.** CD 6/2.

†Oklahoma—U. S. Eng., P. O. Box 61, Tulsa, Zone 2, June 22, bridge over Choteau's Creek on upper part of Fort Gibson Reservoir Mayes Co., Serial No. Eng-34-066-49-117, from J. B. Biles Constr. Co., McAlester, **$79,240.** Est. $80,500. CD 5/31.

CONTRACTS AWARDED

Texas—State Hy. Comn., Austin, June 22, Trinity River Relief Bridge, Hy. FM 51, S. 52 (8), Wise Co., from John F. Buckner & Sons, Cleburne, **$95,377,** received no bids June 22, railway overpass and surf. tr. Hy. 12, F. 1085 (7) and FG 1085 (3), Denton Co. CD 5/27.

CONTRACTS AWARDED

Arkansas—State Hy. Dpt., Little Rock, 8 concrete, steel bridges, approaches, Hy. 64, Faulkner Co., to Forcum-James Co., Dyersburg, Tenn., **$143,850.** Bids 6/24, awarded 6/24. CD 6/15.

STREETS AND ROADS

BIDS ASKED

STATE HIGHWAY LETTINGS

July 5
Maryland
July 7
Nebraska
July 8
Kansas
Kentucky
Minnesota

July 12
Kansas
July 13
California
Louisiana
New York
July 21
California

July 4

Que., Montreal — Exec. Com., City Hall, pavement, sidewalks, Henri Julien St., Mariette Ave., Garland Pl., for Municipality, Plans deposit $35. H. A. Gibeau, city engr.

July 6

Mass., Dorchester—City of Boston, P. Wks. Dpt., City Hall Annex, Boston, sheep asph. paving Talbot Ave. Approx. $120,000. Plans deposit $2.

July 7

Mass., Dorchester—City of Boston, P. Wks. Dpt., City Hall Annex, Boston, sheep asph. paving Dorchester Ave. Approx. $60,000. Plans deposit $2.

July 8

Fla., Pensacola—City, resurf. 10 mi. streets. Extended date. CD 6/22.

La., Tallulah—Town, Town Hall, resurf. 8 mi. streets.

July 11

Fla., Surfside—Town, Wayne P. Mitchell, mgr., street imprvs. Plans deposit $5.

July 19

Tex., Griffing Park—City, via Port Arthur (P. O. Port Arthur), b. conc. paving. $175,000. Charles P. Smith, Port Arthur, engr. Bids 6/14 rejected. CD 5/26, under LB.

(Continued on page 54)

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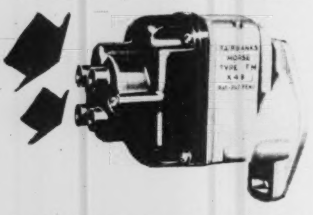

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(Continued from page 52)

LOW BIDDERS

California — State Div. Hys., Sacramento, June 22, plant mix surf. 2 mi. between Orcutt Wye and Santa Maria, Santa Barbara Co., from Madonna Constr. Co., 581 Higuera St., San Luis Obispo, **$230,779.** CD 6/1.

†California—Pub. Rds. Admin., Phelan Bldg., San Francisco, June 21, hy. imprv. 3.698 mi. Calif. F. H. 46-A, Harmony Ridge National Forest, Nevada and Placer Counties, from Richter Bros., 2136 Spencer Ave., Oroville, W. H. Darrough & Sons, Box 392, Yuba City and M. J. Ruddy & Son, 922 J. St., Modesto, **$429,899.** CD 6/7.

†Calif., Los Angeles—U. S. Eng., 75 S. Figueroa St. June 22, street paving at Tujunga Wash bridges, from P. J. Akmadzich, Box 8, Sunland, **$84,221.** Est. $100,000. CD 5/26.

Calif., Los Angeles—City, Bd. P. Wks., 153 City Hall, June 22, imprv. Western Ave., Torrance Blvd. to Anaheim St., from Warren Southwest, Inc., 20900 S. Normandie St., Los Angeles, **$381,059.** CD 6/9.

Colorado—State Hy. Dpt., Denver, June 21, grav. and structures 6.415 mi. State Hy. 64, between Rangely and Meeker, Colo. Proj. S-0144 (6), Rio Blanco Counties, from Harrison Constr. Co., and R. R. Atchison, 1566 S. Bannock St., Denver, Colo., **$236,932.** Est. $287,301. CD 6/13.

●Illinois—State Hy. Dpt., Springfield, June 24, c. conc. 8.59 mi. Rt. U. S. 12, Lake Co., from Arcole Midwest Corp., 3225 Main St., Evanston, **$1,656,467*****c. conc. patching Rt. 1, 135, U. S. 36, 45 and 150, Crawford, Clark, Edgar, Champaign, Ford and Vermilion Counties, from Danville Constr. Co., P. O. Box 223, Danville, **$166,917*****b. conc. 6.11 mi. Ill. Rt. 388, Peoria Co., from S. M. H. Constr. Co., 1500 N. Adams St., Peoria, Zone 3, **$61,533*****c. conc. patching Ill. Rt. 3, 7, 9 and 68, U. S. 30, DeKalb and Kane Counties, from George Welch, Hotel Sherman, Chicago, $101,414. CD 6/15.

La., New Orleans—City, Purch. Div., 302 City Hall, June 20, street paving, incl. Projs. 10987, 10988, 10989, 10990, 11018 and 11032, from Boh Bros. Constr. Co., 2400 Cypress St., **$174,435*****Projs. 10986, 10998 and 11009, from R. P. Farnsworth & Co., 1515 S. Salcedo St., **$80,093*****Projs. 10999, 11013, 11015 and 11031, from Lang Co. 2500 Poydras St., **$247,591***** Projs. 11014, and 11030 from Texas Bitulithic Co., Burma Rd., **$97,351.**

Md., Baltimore—Mayor & City Council, City Hall, June 22, sheet asph. resurf. Contr. 991, from The National Paving & Contg. Co., 4200 Menlo Dr., **$133,447;** c. conc. paving streets, Contr. 985, from Property Sales Co., Court Square Bldg., **$61,207.** CD 6/15.

Massachusetts — Commonwealth of Mass., 100 Nashua St., Boston, June 21, highway, Brighton Ave., from J. P. Condon Corp., 105 Coolidge Hill Rd., Watertown, **$125,191.** CD 6/15.

Tex., Houston — Harris Co., Courthouse, June 20, triple-base asph. paving 3.7 mi. Cedar Bayou-Wooster Rd. and six 25 ft. spans rein.-con. span bridge, concrete deck; concrete caps on treated timber piling, from Brown & Root, Inc., Box 3, **$115,177.** Est. $140,000. CD 6/7.

CONTRACTS AWARDED

●Arkansas—State Hy. Dpt., Little Rock, major constr. 11.31 mi. Hy. 13, Magnolia, Columbia Co., and major construction and one 276 ft. rein.-con. deck girder bridge on 9.955 mi. Hy. 4, Hope Hempstead Co., to R. H. Davis, Stamps, **$110,895** and **$237,922** respectively***major construction 8.191 mi. Hy. 30, England, Lonoke Co., to Ben M. Hogan & Co., 110 Fairview, Little Rock, **$370,723*****major construction 3.406 mi. Hys. 14 and 181, Keiser, Mississippi Co., to Bucton Constr. Co., Hazen, **$106,370*****major construction 7.89 mi. Hy. 79, Clarendon, Monroe Co., to S. M. Dixon, Warren, **$324,003*****major construction 11.64 mi. Hy. 67, Searcy, White Co., to J. B. Michael & Co., Inc., 10201 Heywood St., Memphis, Tenn., **$676,277.** Grand total $1,826,190 Bids 6/24. CD 6/15.

Pa., Phila.—Dpt. P. Wks., City Hall Annex, Phila., paving 42 St., to Union Paving Co., Broad and Stiles Sts. **$77,109.** Bids 6/21. CD 5/27.

Tex., Crane—Crane Co., Courthouse, addnl. road repairing, surf., own forces. **$78,000.** CD 12/1.

Tex., Dallas—Dallas Co., Courthouse, reconditioning, repairing roads, Precinct 1, **$175,000;** road reconstruction, surf., Precinct 2, **$225,000;** road reconstruction, surf. Precinct 3, **$190,000,** force account. Grand total $590,000. H. Klinger, co. engr. CD 6/27.

Tex., Houston — Southern Oaks, Inc. and Duffy Realty Co., 2517 University St., constr. and paving addnl. streets in Southern Oaks area in vicinity of Brays Bayou, to Texala Constr. Co., 2327½ McCarty St., **$69,000.** Est. $85,000. CD 6/6.

Ontario — Dpt. Hys., Toronto, asph. or macad. paving from east end Cummings Bridge to Base Line, east of Eastview, to Dibblee Constr. Co. Ltd., 248 Albert St., Ottawa. Approx. **$250,000.**

EARTHWORK, WATERWAYS

BIDS ASKED

July 7

Tex., Crystal City—Zavala-Dimmit Counties Water Imprvt. Dist. 1, c/o J. W. Little, pres., Crystal City, upper dam and spillway exten. $30,000. Plans deposit $10. H. R. F. Helland, Frost Bank Bldg., San Antonio, engr.

July 27

La., St. Joseph—Gravity Drainage Dist., 4, Tangipahoa Parish, St. Joseph, gravity drainage sys., incl. eath excav. for drainage channels, clearing right-of-way, and timber bridges. Plans deposit $15. E. G. Treilles, Amite, engr.

August 16

Pennsylvania—Water & Power Resources Bd., Dpt. Forests & Waters, M. F. Draemel, secy., Educational Bldg., Harrisburg, Contr. 31, dredging floodway clearing and excavation in River Sect. III of the Schuylkill River. Plans deposit $50. Schuylkill River Project Engineers, 20 S. 15 St., Phila., engrs.; adv. ENR 6/30.

LOW BIDDERS

†California—U. S. Eng., 751 S. Figueroa St., Los Angeles, June 22, dredging in Morro Bay Harbor, Serial No. Eng-40-353-49-86, from Standard Dredging Co., 200 Central Bldg., Los Angeles, **$227,468.** CD 6/9.

†California — U. S. Eng., Wright Bldg., Sacramento, June 21, levee setback and bank protection at Miner Slough, Ryer Island, below Hollenbeck about 6 mi. northwest of Walnut Grove, Spec. 1401, from M. Malfitano & Son, Inc., 750 Pittsburg, total bid without alternate, **$68,699** and Herringer & Co., Box 606 Rio Vista, total bid using alternate, **$69,939.** CD 6/7.

†California—U. S. Eng., Wright Bldg., Sacramento, June 21, outlet work for Farmington Dam site, incl. concrete control house and tower, concrete inlet and outlet, etc., from Charles Mac Closkey Co., 112 Market St., San Francisco, **$202,804.** CD 6/2.

†Illinois—U. S. Eng., 826 U. S. Court House & Custom House, 1114 Market St., St. Louis 1, Mo., June 23, approx. 210,000 cu. yd. levee embankment, etc., East St. Louis and vicinity, Proj. Item I-B (1), Madison Co., Serial No. Eng. 23-065-49-138, from Missouri Dredging Co., Continental Bldg., 3615 Olive St., St. Louis, 8, Mo., **$156,000.** Est. $140,345. CD 6/7.

●Illinois—U. S. Eng., 826 U. S. Court House and Custom House, 1114 Market St., St Louis 1, Mo., June 24, levees, Wood River Drainage and Levee Dist., Item II-A (1) Item II-A (2) and Item II-A (3), Serial No. Eng. 23,065-49-139, from LaCrosse Dredging Corp., 310 S. Michigan Ave., Chicago, **$1,286,610.** CD 6/8.

†Iowa—U. S. Eng., Clock Tower Bldg., Rock Island, Ill. June 21, dam and appurtenances, Stage I, Coralville Reservoir, Iowa River, Johnson Co., Serial No. Eng. 11-117-49-75, from E. M. Duesenberg, Inc., Clear Lake, **$336,034.** Est. $264,000. CD 5/26.

†Ky., Louisville—U. S. Eng., 830 W. Broadway, June 24, flood protection works, Sect. A, Part I, from Terry Steadman Co., Bay City, Mich., **$936,590.** CD 5/24.

La., Metairie—Fourth Jefferson Drainage Dist., 502 Metairie Rd., June 15, enlarging certain portions, Bonnabel and Suburban Canals, from Monroe J. Wolfe, 1023 Ridgewood Dr., New Orleans, **$145,227.** CD 6/2.

†Minn., Minneapolis—U. S. Eng., 1217 U. S. Post Office and Custom House, St. Paul, Zone 1, June 23, Stage 1, dam, concrete, masonry and steel service bridge, Lower Lock and Dam St. Anthony Falls, Mississippi River, Serial No. Eng. 21-018-49-93, from Al Johnson Constr. Co., 608 Foshay Tower, **$1,656,415.** Est. $1,251,600. CD 6/1.

†Texas—U. S. Eng., 606 Santa Fe Bldg., Galveston, June 23, 2 dredging ranges, Galveston Harbor Entrance Channel Inv. No. Eng-41-243-49-332, from Tellepsen Constr. Co., 1710 Telephone Rd., Houston, **$22,350,** materials furnished by owner, **$18,300.** Est. $50,000. CD 6/7.

Texas—U. S. Eng., 606 Santa Fe Bldg., Galveston, June 21, dredging, Gulf Coast Intracoastal Waterway from Live Oak Bayou to Matagorda Bay, Serial No. 41-243-49-334, from Bauer-Smith Dredging Co., Port Lavaca, **$180,508.** Est. $140,000. CD 6/10.

CONTRACTS AWARDED

Tex., Houston—G. Faith & J. D. Seay, 6528 Harrisburg Blvd., grading, drainage, levelling, own forces. Approx. **$40,000.**

AIRPORTS AND AIRBASES

LOW BIDDERS

†Calif., San Francisco—FUELING SYSTEM—U. S. Eng., 74 New Montgomery St., San Francisco, June 22, aviation gasoline fueling sys., for Hamilton Field Air Force Base, Spec. 04-203-49-166, from C. Norman Peterson, 2832 9 St., Berkeley, **$316,104.**

Ind., Gary—AIRPORT IMPRVS.—Bd. Aviation Comrs., C. W. Bader, chn., June 21, Div. 1, grading, drainage, clearing site, hard-surf. runways, taxi strip, parking area, from A. L. Dougherty Co., Guarantee Bldg., Indianapolis, **$255,292.** CD 6/16.

†Pa., Phila.—CATAPULT BLDG.—Pub. Wks. Office, Phila. Naval Base, Phila., June 17, catapult bldg. completion, N. A. A. S. Mustin Field Spec. 22106, from Hughes Foulkrod, 1505 Race St., **$336,847.** CD 6/2.

●†R. I., Quonset Point—OVERHAUL and REPAIR BLDG.—Officer in Charge of Construction, Naval Base, Pub. Wks. Bldg., Quonset Point, June 20, engine overhaul exten. to Q. and R. Bldg., Spec. 22366, from Edmund J. Rappeli Co., Inc., 515 Massachusetts Ave., Cambridge, Mass. **$1,539,000.** CD 5/25.

PUBLIC BUILDINGS

BIDS ASKED

July 6

Mo., St. Louis—SCHOOLS—Bd. Educ., Harry Rhodes, bldg. comr., 911 Locust St., Zone 1, steel, brick, veneer Cole School, 3963 W. Belle St., Humboldt School, 2 and Victor Sts., Dunbar School, 1415 N. Garrison Ave. and Divoll School, 2918 Dayton St.; $300,000.

R. I., Providence — Memorial State, F. A. Adams, purch. agt. State House, repairing, altering Sect. B, Veterans Memorial Bldg., Proj. 9515, Brownell and Park Sts. Approx. $600,000. Plans deposit $50. Oresto DiSaia, 703 Gardner Bldg., archt. CD 12/4/46.

N. B., Chatham—HOUSES—P. J. Mangan, engr., c/o Central Mortgage & Housing Corp., 1032 Gottingen St., Halifax, N. S., 100 houses. Tenders, Chatham, N. B., D. N. D.—Married Quarters. Approx. **$670,000.** Plans deposit $10.

●P. E. I., Summerside—HOUSES—P. J Mangan, engr., c/o Central Mortgage & Housing Corp., 1032 Gottingen St., Halifax, N. S., 150 houses, Tenders, Summerside, P. E. I. D. N. D. —Married Quarters Approx. $1,000,000. CD 1/13.

July 7

●Ind., North Madison—HOSPITAL—State of Indiana, P. Wks. & Supply Div., 404 State House, Indianapolis, hospital addns., alterations, Madison State Hospital, $1,000,000 extended date, McGuire & Shook, 1400-01 Fletcher Trust Bldg., Indianapolis, archts. CD 6/1.

N. J. Princeton—SCHOOL—Princeton Twp. Bd. Educ., school, $700,000. Carl E. Stover, Jamesburg Rd., Dayton, archt. CD 10/30/46.

July 8

●Mass., Arlington—HOUSING, etc.—Town of Arlington Housing Auth., W. D. Baker, chn., Arlington, twenty-one 2 story, brick, units, administration bldg., veterans housing, Freemont and Gardner Sts. $1,728,587, Plans deposit $50. CD 11/24.

Mass., Marblehead — HOUSES — Town of Marblehead Housing Auth., E. J. Cuddihy, chn., 3 Pierce St., 2 story houses, 70 unit veterans housing $695,798. Plans deposit $25. Emery-Wait-Smith Assoc., 92 State St., Boston, archts. CD 11/1.

Miss., Starkville — HOSPITAL — Oktibbeha Co., Starkville, hospital, $475,000. Plans deposit $50. Thomas H. Johnston Jr. & Thomas Shelton Jones, P. O. Box 512, archts.

July 12

●Ill., Lincoln—POWER PLANT—State of Illinois, Springfield, power plant, Lincoln State School and Colony, $2,200,000 C. Herrick Hammond, Armory Bldg., Springfield ch. state archt.

Tex., Austin—MUNICIPAL City, Guiton Morgan, mgr., Municipal Bldg., 124 W. 8 St., masonry municipal bldg. addns., alterations. $410,000. Plans deposit $25. Page, Southerland & Page, 602 West Ave., archts. CD 6/9.

July 13

Mass., Rockport—HOUSING—Town of Rockport Housing Auth., W. E. Cottle, chn., twelve 1 story houses, veterans housing. $350,000. Plans deposit $50. Thomas Hixon Co., 1152 Commonwealth Ave., Newton, archt. CD 1/27.

July 14

N. Y., Oswego—DORMITORY, etc. New York State Dormitory Auth., State Educ. Bldg., Albany, dormitory and residence hall, $856,500. Larimer Rich & Robbins L. Conn., 215 Montague St., Brooklyn, archts. CD 12/26/46.

July 18

N. Y., Youngsville—GYMNASIUM, etc.—Bd. Educ., Youngsville, gymnasium and auditorium addn. Plans deposit $25. E. P. Valkenburg, 7 Linden Ave., Middletown, archt.

July 22

†N. M., Las Cruces—MISSILE ASSEMBLY—U. S. Eng., P. O. Box 1538, Albuquerque, 86x192 ft. each, rein.-con., steel masonry panel type walls missile assembly bldgs. at White Sands Proving Grounds. Serial No. Eng-29-005-49-116. Approx. $250,000. CD 8/13/48.

About August 1

Kan., Ulysses — HOSPITAL — Bob Wilson Grant Co., Memorial Hospital, hospital, Mann & Co., Box 1148, Hutchinson, archts. CD 10/23/46.

August 1

●Ark., West Memphis—HOSPITAL—Crittenden Co., Wes Memphis, county hospital, $1,200,000 with equip. Plans deposit $200. Extended date. Dent & Aydelott, First National Bank Bldg., Memphis, Tenn., archts. CD 5/18.

Proposal Advertisements see pp. 55 to 58

OFFICIAL PROPOSALS

Bids: July 13, 1949 (209)

Postponement of Bids

FOR
ONONDAGA COUNTY WAR MEMORIAL AUDITORIUM
Syracuse, New York

Notice is hereby given that the receiving and opening of bids set for 2 P.M. E.D.T. Wednesday, June 22, 1949, has been postponed until 2 P.M. E.D.T. Wednesday, July 13, 1949, and SEALED PROPOSALS will be received until 2 P.M., E.D.T. Wednesday, July 13, 1949, by R. W. Sollinger, County Purchasing Agent in Room 107 at Court House, Syracuse, N. Y., at which time they will be publicly opened and read in Supervisors Chambers on Fourth Floor; for a multi-purpose auditorium building of 9,000 seating capacity, located in the City of Syracuse, New York.

Proposals will be received separately on General Construction with Arch-rib concrete roof structure; Plumbing; Heating; Ventilation; Refrigeration and Rink Piping; Electrical.

Information for Bidders, Plans and Specifications may be examined in the offices of the County Purchasing Agent, or Edgarton and Edgarton, Architect-Engineer Associates, 401 Herald Building, Syracuse, N. Y., or Syracuse Builders' Exchange, 207 James Street, Syracuse 2, New York. General information pertaining to the design of the concrete arch roof structure may also be obtained from Ammann and Whitney, Consulting Engineers, 76 Ninth Avenue, New York 11, N. Y. Information pertaining to Mechanical and Electrical Work may be obtained from Robson & Woese, Inc., 2030 Erie Blvd. E., Syracuse, New York.

One set of General Construction Drawings and Specifications are obtainable from the County Purchasing Agent by General Contractors by depositing $50.00. One set of each Mechanical or Electrical Drawings and Specifications are obtainable from the County Purchasing Agent by Mechanical or Electrical Contractors by depositing $15.00 for each set. Any sets in addition to the above are obtainable by prime bidders by paying $30.00 per set of General Construction and $10.00 per set for each Mechanical or Electrical. The $50.00 and $15.00 deposit for the initial sets will be refunded upon return of the Drawings and Specifications, in good condition, within one week after bid opening date. The $30.00 and $10.00 payments for additional sets will not be refunded. Other than prime bidders shall buy plans and specifications from the Architect-Engineer without refund.

The right is reserved to reject any and all bids.

Dated, Syracuse, N. Y., June 10, 1949.

ROBERT W. SOLLINGER
County Purchasing Agent
107 Court House
Syracuse, New York

Bids: July 11, 1949 (187)

Water Softening Plant

6 MGD NEW WATER SOFTENING PLANT
HURON, SOUTH DAKOTA

Sealed proposals for furnishing all labor, materials, equipment and constructing a New Water Softening Plant will be received by the Board of Commissioners, Huron, South Dakota, until 2:00 PM (CST) on the 11th day of July 1949 and then publicly opened and read.

The work covers the furnishing of labor and materials and equipment installed and constructing the complete New 6 MGD Water Softening Plant, requiring approximately:

PART I	
Excavation	9,500 Cu Yds
Concrete Substructure	2,500 Cu Yds
Superstructure, Brick, or Steel or Concrete Blks, 1 and 2 Stories	114 ft x 182 ft
Plant Piping & Valves	30 Tons
PART II	
HS Motor Pumps	2
Lime Equipment—Bins, Elevator, Chutes, Slaker, Feeders, Filter Equipment for 3—1½ MGD Units,	
Razing & Altering Old Filter Bldg.	
LS Pump Station, altered & 3 New Motor-Pumps, Piping & Valves	
River Intake, Structure & Pipe Line	
Yard Work, HS Main & Ventr. Meter, Wash Sewer & Sanit. Sewer.	

Each proposal shall be accompanied by a Cashier Check or Certified Check on a South Dakota Bank as a guarantee of entering into the Specified Contract and furnishing a 100% Performance Bond. All proposals must be made on the forms to be furnished by the Owners.

Plans, Specifications, Bond and Contract Forms may be seen at the Auditor's Office, Huron or at the Consulting Engineer Office, E. H. Dunmire, 2774 South St., Lincoln, Nebraska or copies of Plans, Specifications, Bidding Forms etc. may be obtained from the Consulting Engineer by the deposit of $50.00, of which, $10.00 will be returned for each set of documents returned at the time of the Letting.

Payment for the work will be made monthly, in cash, on the Engineer's Estimates.

City reserves the right to reject any or all bids, or Item Bids in Part II.

J. S. Tschetter, Mayor
W. H. Olson, Auditor
E. H. Dunmire, Conslt. Engr.
Lincoln, Nebraska

Bids: July 18, 1949 (226)

Heating Plant for Building No. 5

THE PORT OF NEW YORK AUTHORITY
PORT NEWARK
CONTRACT PN-9

Sealed proposals for furnishing and installing a heating plant for Building No. 5 at Port Newark, will be received at the office of the Chief Engineer of The Port of New York Authority, Room 1100, 111 8th Ave., New York 11, N. Y., until 11:45 A. M., Monday, July 18, 1949, at which time and place said proposals will be opened and read.

Contract documents may be seen at the office of the Chief Engineer, and copies will be furnished upon deposit of $10.00 per set. The deposit will be remitted if the documents are returned in good condition, not later than thirty days after the opening of proposals.

THE PORT OF NEW YORK AUTHORITY
Howard S. Cullman,
Chairman.
New York, June 30, 1949.

Bids: July 19, 1949 (225)

Alterations and Additions to Taxiway Lighting Systems

THE PORT OF NEW YORK AUTHORITY
LA GUARDIA AIRPORT
CONTRACT LGA-25

Sealed proposals for alterations and additions to taxiway lighting systems at La Guardia Airport, will be received at the office of the Chief Engineer of The Port of New York Authority, Room 1100, 111 8th Ave., New York 11, N. Y., until 11:30 A. M. Tuesday, July 19, 1949, at which time and place said proposals will be opened and read.

Contract documents may be seen at the office of the Chief Engineer and copies will be furnished upon deposit of $10.00 per set. The deposit will be remitted if the documents are returned in good condition, not later than thirty days after the opening of proposals.

THE PORT OF NEW YORK AUTHORITY
Howard S. Cullman,
Chairman.
New York, June 30, 1949.

(Continued on page 56)

Contractors Watch This Section —

for new projects. Publish your announcements through the proposal sections of *Engineering News-Record* and get their bids.

U. S. Government

(Continued from page 55)

NEW ORLEANS DISTRICT, CORPS OF ENGINEERS, **Foot of Prytania** Street, New Orleans, La.—Sealed bids will be received in this office until 11:00 a.m., CST, August 2, 1949, and then opened for constructing a 500-bed Veterans Administration Hospital in the city of New Orleans, in the New Orleans District. Further information on application.

(188)

UNITED STATES DEPARTMENT OF THE INTERIOR, Bureau of Reclamation. Sealed bids (Specifications No. 2707) will be received by Bureau of Reclamation, Superior, Nebraska, July 14, 1949, and then publicly opened for furnishing labor and materials and performing all work for the construction of earthwork, canal lining, and structures, station 1+87.3 to station 772+00, Courtland Canal, Bostwick Division, Nebraska-Kansas, Missouri River Basin Project. The work is situated south of the Republican River in the vicinity of Guide Rock and Superior, Nebraska. Principal items are approximately: excavation, all classes, for canal, 1,190,000 cu. yds.; excavation, all classes, for structures and wasteways, 97,000 cu. yds.; concrete for structures, 8,000 cu. yds.; furnishing and placing reinforcing steel, 1,200,000 lbs.; and other work. The work is to be performed under nine schedules. Time allowed for completion will be 700 days. For particulars, address Bureau of Reclamation, Superior, Nebraska; or Building 1-A, Denver Federal Center, Denver, Colorado.

MICHAEL W. STRAUS, Commissioner.

(220)

Federal Works Agency, Public Buildings Administration, Washington, D. C., June 29, 1949.—Sealed bids in duplicate for Construction (Except Eelevators and dumbwaiters) of the Superstructure of the Clinical-Center (Building No. 10) at the National Institutes of Health, Bethesda, Maryland, will be received until 1:00 P. M., Standard Time, on August 23, 1949, in Room No. 1125, Federal Works Agency Building, Washington, D. C., and then publicly opened in Room No. 1126. Bid guarantee is required. U. S. Standard Form No. 23, Construction Contract, will be used and performance and payment bonds will be required. Upon request one set of Prebid Documents and three sets of drawings and specifications will be supplied without charge to each general contractor interested in bidding on the complete project, all of which must be returned. General contractors who have obtained three sets as above provided may obtain additional sets or parts of sets at the following prices:

Complete set of drawings and specifications	$100.00
Architectural drawings, only, and Specifications	45.00
Structual drawings, only, and specifications	15.00
Mechanical drawings, only, and mechanical specifications	40.00

Payments for additional sets will not be refunded and the material need not be returned. Checks offered as payment must be made payable to the order of the Treasurer, U. S. Upon request and in the discretion of the undersigned one set of drawings and specifications will be furnished to builders' exchanges, chambers of commerce and other similar organizations, with the understanding that the set will be retained on their premises and made available for inspection by any interested sub-contractor or material firm.

Bidding material may be obtained at Room No. 507, Lemon Building, 1729 New York Ave., N. W., Washington 25, D. C., Phone EXecutive 4909, Extension 2397.

Drawings and specifications will also be available, for examination by interested persons, in Room No. 507, Lemon Building, Washington, D. C., and at the following Division Offices of Public Buildings Administration:

New York, N. Y.—Room 731, Custom House.

Philadelphia, Pa.—Room 902, Custom House and Appraisers' Stores.

Atlanta, Ga.—Room 303, Federal Annex.

Chicago, Ill.—Room 1124, Post Office Building.

Kansas City, Mo.—Room 2100, Fidelity Building.

Boston, Mass.—Room 620, Post Office and Court House.

For the information of bidders, the drawings pertaining to the construction of the Substructure of the Clinical Center will be available for examination at the above locations. General contractors may also purchase, without refund, a set of these information drawings, or any of the part thereof at the following prices:

Complete set	$35.00
Architectural drawings, only	14.00
Structural drawings, only	9.00
Mechanical drawings, only	12.00

W. E. Reynolds,
Commissioner of Public Buildings,
Federal Works Agency

(230)

OFFICIAL PROPOSALS

Bids: August 12, 1949 (207)

Substructure and Approach Ramps

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

SEALED BIDS WILL BE RECEIVED BY the Triborough Bridge and Tunnel Authority, at its office, Administration Building, Randall's Island, Manhattan, N. Y. 35, as follows:

Until 11 a.m., daylight saving time, on Friday, August 12, 1949 for the Substructures and Approach Ramps of the Pedestrian Bridge over the Harlem River connecting East 103rd Street with Wards Island, Borough of Manhattan, contract WI-1.

A more complete description of the work and full information for bidders is given on the drawings and in other contract papers.

Contract drawings and specifications may be seen at the office of O. H. Ammann, Consulting Engineer, Room 866, 76 Ninth Avenue, Manhattan, New York 11, N. Y.

Each bid must be accompanied by a deposit in the amount of Forty Thousand Dollars ($40,000).

Blank forms for proposals, information for bidders, contract, bond and specifications may be obtained at the office of O. H. Ammann Consulting Engineer, Room 866, 76 Ninth Avenue, Manhattan, New York 11, New York on or after July 5, 1949. Arrangements will be made whereby prospective bidders desiring sets of specifications and blueprints of the contract drawings for their own use may secure same, the cost thereof ($25.00 per set) to be paid by them, which will be refunded if said specifications and blueprints are returned in good order within 30 days after the award of the Contract.

Dated: July 1, 1949

TRIBOROUGH BRIDGE AND
TUNNEL AUTHORITY,
George E. Spargo,
General Manager and Secretary

Bids: August 12, 1949 (228)

Superstructure

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

SEALED BIDS WILL BE RECEIVED BY the Triborough Bridge and Tunnel Authority, at its office, Administration Building, Randall's Island, Manhattan, N. Y. 25, as follows:

Until 2 p. m., daylight saving time, on
FRIDAY, AUGUST 12, 1949

For the Superstructure of the Pedestrian Bridge over the Harlem River connecting East 103rd Street with Wards Island, Borough of Manhattan, contract WI-2.

A more complete description of the work and full information for bidders is given on the drawings and in other contract papers which may be seen at the office of O. H. Ammann, Consulting Engineer, Room 866, 76 Ninth Avenue, Manhattan, New York 11, N. Y.

Each bid must be accompanied by a deposit in the amount of Fifty Thousand Dollars ($50,000).

Blank forms for proposals, information for bidders, contract, bond and specifications may be obtained at the office of O. H. Ammann, Consulting Engineer, Room 866, 76 Ninth Avenue, Manhattan, New York 11, N. Y. on or after July 5, 1949. Arrangements will be made whereby prospective bidders desiring sets of specifications and blueprints of the contract drawings for their own use may secure same, the cost thereof ($25.00 per set) to be paid by them, which will be refunded if said specifications and blueprints are returned in good order within 30 days after the award of the Contract.

Dated: July 1, 1949

TRIBOROUGH BRIDGE AND TUNNEL
AUTHORITY,
George E. Spargo, General Manager and
Secretary

OFFICIAL PROPOSALS

Bids: July 18, 1949 (224)

Roof Rehabilitation of Domestic Terminal

THE PORT OF NEW YORK AUTHORITY
LA GUARDIA AIRPORT
CONTRACT LGA-24

Sealed proposals for the rehabilitation of the roofs of the Domestic Terminal Building at La Guardia Airport will be received at the office of the Chief Engineer of The Port of New York Authority, Room 1100, 111 8th Ave., New York 11, N. Y., until 11:30 A. M. Monday, July 18, 1949, at which time and place said proposals will be opened and read.

Contract documents may be seen at the office of the Chief Engineer, and copies will be furnished upon deposit of $10.00 per set. The deposit will be remitted if the documents are returned in good condition, not later than thirty days after the opening of proposals.

THE PORT OF NEW YORK AUTHORITY
Howard S. Cullman,
Chairman.

New York, June 30, 1949.

Bids: July 19, 1949 (229)

East Delaware Tunnel

CONTRACTS 405, 406, 407 AND 408

SEALED BIDS will be received by the Board of Water Supply, at its offices, thirteenth floor, 120 Wall street, New York City, until 10:00 A.M., Eastern Standard Time, on Tuesday, July 19, 1949, for the following four contracts for the construction of the East Delaware tunnel of the Delaware aqueduct, comprising about 25 miles of concrete lined pressure tunnel, circular in section, and 11 feet 4 inches in finished diameter for practically its entire length, the intake works consisting of an intake channel and intake chamber with superstructure of brick with granite trim, and Shafts 1 and 2 which will be circular in section and lined with concrete, all as set forth in the specifications: CONTRACT 405, for the construction of about 20,200 linear feet of tunnel, including the intake structures, located in the Town of Colchester, Delaware county, New York; CONTRACT 406, for the construction of about 43,560 linear feet of tunnel, including Shaft 1 approximately 605 feet deep and 14 feet in diameter except for a 150-foot enlarged section 20 feet in diameter, located in the Towns of Colchester, Delaware county and Rockland, Sullivan county, New York; CONTRACT 407, for the construction of about 40,350 linear feet of tunnel, including Shaft 2 approximately 965 feet deep with a diameter of 14 feet, located in the Towns of Rockland and Neversink, Sullivan county, New York, and CONTRACT 408, for the construction of approximately 27,750 feet of tunnel from the portal at the outlet end, including about 520 feet of 9-foot 6-inch tunnel at the portal, located in the Town of Neversink, Sullivan county, New York.

A bidder on two or more of the four contracts may, if he so desires, specify in the bid form a percentage reduction from the total cost of the particular contract for which he is then bidding, which he will agee to make if he is awarded that contract together with one or more of the other three contracts.

Pamphlets of the four contracts containing information for bidders, forms of bid and contract, specifications, contract drawings, requirements as to surety, etc., can be obtained at the office of the Chief Engineer, Room 1311, at the above address, upon application in person or by mail, by depositing the sum of $5.00 in cash or its equivalent for each pamphlet. Within 30 days following the award of contract or rejection of bids, the full amount of such deposit will be refunded for each pamphlet submitted as a bid and a refund of $4.00 will be made for each other pamphlet returned in acceptable condition. Arrangements will be made whereby prospective bidders desiring blueprints of the contract drawings for their own use may secure same, the cost thereof to be paid by them. For further particulars, apply at the office of the Chief Engineer at the above address.

IRVING V. A. HUIE, President, HENRY HESTERBERG, RUFUS E. McGAHEN, Commissioners, Board of Water Supply; RICHARD H. BURKE, Secretary.

(Continued on page 57)

OFFICIAL PROPOSALS

(Continued from page 56)

July 22, 1949 (223)

Grading, Drainage, Structures & Paving

PENNSYLVANIA TURNPIKE COMMISSION
Harrisburg, Pennsylvania
NOTICE TO BIDDERS

Sealed proposals will be received by the Pennsylvania Turnpike Commission, through the Chairman, 11 North Fourth Street, Harrisburg, Pennsylvania until 10:00 A.M. (Eastern Daylight Saving Time), the 22nd day of July, and immediately thereafter will be taken to the Public Utility Commission's Hearing Room No. 1, North Office Building, State Capitol, Harrisburg, Pennsylvania, and immediately publicly opened and read aloud, for the following contract and/or contracts:

For construction of grading, drainage, structures and paving of Turnpike Section 28B-1, part of the Philadelphia Extension in Tredyffrin, East Whiteland and Charlestown Townships, Chester County, Commonwealth of Pennsylvania. This section being situated as follows:

Beginning at a point approximately 235 feet West of the Charlestown-East Whiteland Township Line in Charlestown Township, at Turnpike Station 105+0 (Chester County) thence in an Easterly direction 25,050 feet to a point about 560 feet East of TR 83 (L.R. 142), Tredyffrin Township, at Turnpike Station 1301+50 (Chester County) a distance of approximately 4.74 miles.

The approximate quantities of the principal items are as follows:
Class I Excavation, 565,000 Cubic Yards; Class II Excavation, 24,500 Cubic Yards; Reinforced Concrete Pavement, 135,000 Square Yards; Class A Concrete, 1,100 Cubic Yards; Class B Concrete, 7,000 Cubic Yards; Plain Steel Bars, 812,000 Pounds; Fabricated Structural Steel, 556,000 Pounds.

For construction of grading, drainage, structures and paving of Turnpike Section 28B-2, part of the Philadelphia Extension, in Tredyffrin Township, Chester County and Upper Merion Township, Montgomery County, Commonwealth of Pennsylvania. This section being situated as follows:

Beginning at a point approximately 460 feet East of TR 83 (L.R. 142) in Tredyffrin Township at Turnpike Station 1300+50 (Chester County) thence in an Easterly direction 15,800 feet to a point 140 feet West of the centerline of the Reading Railroad, Upper Merion Township, at Turnpike Station 78+50 (Montgomery County) a distance of approximately 2.99 miles.

The approximate quantities of the principal items are as follows:
Class I Excavation, 654,000 Cubic Yards; Class II Excavation, 21,000 Cubic Yards; Reinforced Concrete Pavement, 119,500 Square Yards; Class A Concrete, 1,700 Cubic Yards; Class B Concrete, 6,500 Cubic Yards; Plain Steel Bars, 816,000 Pounds; Fabricated Structural Steel, 3,178,000 Pounds.

Copies of plans, specifications and other contract documents, including cross-sections, are on file and open to public inspection at the offices of the Pennsylvania Turnpike Commission located at Harrisburg, Pennsylvania, on July 8, 1949. Copies of cross-sections may be purchased from the Pennsylvania Turnpike Commission for the sum of Fifty Dollars ($50.00) per set.

Specifications and contract documents for each section, exclusive of cross-sections, may be obtained from the Commission upon deposit of Ten Dollars ($10.00) for each set, such deposits to be refunded in full to any actual bidder upon return of such documents in good condition within five (5) days after the date of the opening of the bids. Refund will be made for all plans, contract documents and cross-sections returned, if the project is withdrawn from letting by the Pennsylvania Turnpike Commission. Remittances are payable to the Pennsylvania Turnpike Commission and must accompany requests for drawings, specifications and cross-sections.

The Pennsylvania Turnpike Commission reserves the right to award each section as a separate contract and/or in any combination of contracts.

The character and amount of bid security to be furnished by bidder is stated in the Instructions to Bidders.

No bids may be withdrawn for thirty (30) days after the scheduled closing time for receipt of bids.

PENNSYLVANIA TURNPIKE COMMISSION
Harrisburg, Pennsylvania
June 20, 49
James F. Torrance
Secretary and Treasurer

OFFICIAL PROPOSALS

Bids: July 13, 1949 (218)

State Road Work

NOTICE TO CONTRACTORS: STATE DEPARTMENT OF PUBLIC WORKS, ALBANY, N. Y.—Pursuant to the provisions of Chapter 63, Laws of 1936, as amended, and special provisions for projects financed with federal aid funds, sealed proposals will be received until ten-thirty o'clock A.M., advanced standard time, which is nine-thirty o'clock A.M., eastern standard time on Wednesday, July 13, 1949, by Henry A. Cohen, Director, Bureau of Contracts & Accounts, 14th Foor, The Governor Alfred E. Smith State Office Building, Albany, N. Y., for the following projects: Maps, plans,

specifications and proposal forms may be seen and obtained at the office of the State Department of Public Works, Bureau of Contracts & Accounts, Albany, N. Y., and at the office of the District Engineers noted below, and may also be seen at the office of the State Department of Public Works, 270 Broadway, New York City.

The deposit for plans and proposal forms for each contract containing 1 to 15 sheets is $5.00; 16 to 30 sheets, $10.00; over 30 sheets, $20.00. A refund will be made in full to bidders for the return of one set in good condition within 30 days of award or rejection of bids; refund for all other sets in good condition, similar period, will be 50% of deposit.

County	Contract No	Name	Miles	Type	Deposit	Estimated Cost of Work
		DISTRICT No. 1				
		G. L. Nickerson, 353 Broadway, Albany 1, N. Y				
Albany & Schenectady	RC 49-71	Albany-Schenectady, Pts. 1 & 2, S. H. 176, 385 Schenectady-Albany A. H. 179	7.42	Reflective Striping of Curbing	$250 Plans $5	$4,300
		DISTRICT No. 2				
		Lacy Ketchum, 109 No. Genesee St., Utica 1, N. Y.				
Oneida & Herkimer	RC 49-69	Rome-Floyd, Pt. 1, S.H. 47-6; Pt. 2 Fash 47-8 Rome-Holland Patent, Pt. 2, S. H. 8345 Poland-Trenton, S. H. 5559	5.03	Roadside Improvement	$1,500 Plans $5	$28,000
		DISTRICT No. 3				
		William Robinson, Weigh Lock Bldg., Syracuse 1, N. Y.				
Onondaga	OT 49-0 MT 49-1 RC 49-7 SH 49-12	Ontario Thruway Mohawk Thruway Syracuse-Cicero, S. H. 5470 Le Moyne Avenue	2.65	1.86 mi 9″ Cem Conc Pavt. 48′-52′ Av., 0.43 mi. Asp. Conc. Opt., 0.36 mi. Gravel Surfacing, Alpha I-B 4 Spans 2@ 59′, 35′ 8″, 32′ 1″, Alpha I-B 4 Spans 2 @ 65.65′, 46.25′, 44.25′, I-Beam 57′ 9″ Span I-Beam 50′ Span, Alpha $339.43	$80,000 Plans $20	$1,415,000
		DISTRICT No. 5				
		C. R. Waters, State Office Bldg., Buffalo 2, N. Y.				
Chautauqua	RC 49-75	Jamestown-Stockton, Pt 1, S. H. 1026, Pratt Corners-Sinclairville, S. H. 1471	4.14	4.12 mi. 9″ & 9″-8″-9″ Two Course Cem. Conc. Pavt. 24′ Wide 0.02 mi. Misc. Work Alpha I-Beam 95′ C to C span Reinf. Conc. Slab 30.79′ span Alpha $88.20	$45 000 Plans $10	$844,000
Chautauqua & Cattaraugus	RC 49-77	Versailles Bridge Cattaraugus Indian Reservation; Onoville Bridge, Quaker Bridge & Vandalia Bridge Allegany Indian Reservation; Westfield Village Viaduct Br. No. 1, S. H. 9096	——	Painting 5 Bridges	$4,000 Plans $5	$70,000
		DISTRICT No. 6				
		H. F. Brumm, State Office Bdg., Hornell, N. Y.				
Steuben	FAC 49-4	Corning City; Denison Parkway Extension	3.32	0.53 mi. Asp. Conc. Type 1A, 2.79 mi. Asp. Conc. Opt.	$ 0,000 Plans $10	$1,031,000
	FARC 49-73	Big Flats-Gibson, S. H. 742, Proj. U-225(7), Proj. F-225(7), Proj. F-342(4)				
Tioga	RC 49-70	Owego-Candor, Pt. 2, S. H. 5471	0.67	0.41 mi. Asp. Conc. Opt. 0.22 mi. Misc. Work 0.04 mi. 3 sp. I-Beam 80′ each, Alpha, $287.49	$13,000 Plans $5	$239,000
		DISTRICT No. 7				
		Roy F. Hall, 444 Van Duzee St., Watertown, N Y				
Franklin	RC 49-72	Piercefield-Tupper Lake, Pt. 3, S. H. 9013 Tupper Lake Village, S. H. 5707	2.34	Asp. Conc. Opt.	$4,000 Plans $5	$72,000
		DISTRICT No. 8				
		J. S. Bixby, Pleasant Valley Road, Poughkeepsie, N. Y.				
Westchester	CCP 49-1	Cross County Parkway to Hutchinson River Parkway (Wartburg Connection)	0.58	8″ Cem. Conc. Pavt. 12′ & Var. Wide Ellipt. Arch 50′ 7¾″ Span, Conc. Arch 53′ 10″ Span Rigd Frame 87′ 6″ Span	$90,000 Plans $10	$1,650,000
Westchester	PSC 5970	Elimination of Grade Crossing of the N. Y. C. R. R. Co. with Ashford Avenue (Dobbs Ferry)	0.30	8″ Cem. Conc. Pavt. 40′ Wide Built up Beam spans 405.5′ Built up Beam 3 spans 173′ Pedestrian Subway under R. R.	$55,000 Plans $20	$981,000
		DISTRICT No. 9				
		F. W. Donovan, 71 Frederick St., Binghamton 21F, N. Y.				
Delaware, Sullivan & Wayne, Pa.	RC 49-78	Interstate Bridges Across Delaware River: Hancock-Buckingham Br. No. 10; Lordville-Equinunk Br. No. 9; Kellams-Stalker Br. No. 8 & Callicoon-Damascus Br. No. 7	——	Painting 4 Bridges	$1,000 Plans $5	$19,800

Proposal for each contract must be submitted in a separate sealed envelope with the name and number of the contract plainly endorsed on the outside of the envelope. Each proposal must be accompanied by cash, draft or certified check payable to the order of "State of New York, Commissioner of Taxation & Finance" for the sum as specified in the advertisement and the proposal. The retention and disposal of the bidding check, the execution of the contract and bonds shall conform to the provisions of the Highway Law, as set forth in "Instructions to Bidders".

When optional types are permitted on contracts with federal funds, bidders must state in the space provided in the proposal the exact designation of the optional type upon which the proposal is predicated.

The right is reserved to reject any or all bids.

B. D. TALLAMY
SUPT. OF PUBLIC WORKS

OFFICIAL PROPOSALS

(Continued from page 57)

Bids: August 2, 1949 (221)

Dredging, Floodway Clearing & Excavation of River

The Commonwealth of Pennsylvania will receive sealed proposals through the Water and Power Resources Board, Department of Forests and Waters, Room 404, Education Building, State Capitol, Harrisburg, Pennsylvania until 1:00 P.M. Eastern Standard Time (2:00 P.M. Eastern Daylight Time), Tuesday, August 2, 1949, which will be publicly opened and read at that time for Contract No. 30 for Dredging, Floodway Clearing and Excavation in River Section V of the Schuylkill River in Pennsylvania.

Plans, Specifications, General Conditions and Proposal Forms may be examined free of charge or complete sets not exceeding three (3) copies may be secured by prospective bidders by applying to Schuylkill River Project Engineers, 20 S. Fifteenth Street, Philadelphia, Pennsylvania, upon making a deposit of Fifty Dollars ($50.00) per set. This deposit will be refunded only upon the return of the plans and specifications in good order within ten (10) days after the opening of bids.

Each proposal must be accompanied by a proposal guarantee in the form of a certified check, bank cashier's or bank treasurer's check drawn to the order of the Commonwealth of Pennsylvania in the amount of One Hundred Twenty-five Thousand Dollars ($125,000.00).

A Joint Venture bid will not be considered and all proposals must be completely filled out, signed, executed and sealed in special bid envelope.

Attention is called that Article No. 10 of the Business Corporation Law approved May 5, 1933, P. L. 364, requires a foreign corporation, before doing business in this Commonwealth, to procure a Certificate of Authority to do business in Pennsylvania, from the Pennsylvania Department of State.

The Commonwealth of Pennsylvania reserves the right to reject any or all bids.

COMMONWEALTH OF PENNSYLVANIA
Department of Forests and Waters
M. F. DRAEMEL, Secretary

OFFICIAL PROPOSALS

Bids: July 20, 1949 (222)

Reflooring of Cantilever Bridge

Sealed proposals addressed to The Interstate Bridge Company, c/o D. B. Steinman, 117 Liberty St., New York 6, New York, for the reflooring of the 1250 foot cantilever bridge across the Ohio River from Bellaire, Ohio to Benwood, W. Va., will be received by the undersigned until 11:00 A.M., Eastern Daylight Saving Time, on the morning of July 20, 1949, and not thereafter, and at that time and place will be opened and read. Said proposals should be endorsed "Proposal for reflooring The Interstate Bridge".

About 49 percent of the new floor will be of reinforced concrete construction and the remainder will be of open steel grating.

Plans, Specifications, General Provisions and form of Proposal, Bond and Contract for the work are on file at the office of D. B. Steinman, Engineer, 117 Liberty Street, New York 6, New York, and may there be seen.

Upon written request and the payment of $10.00, D. B. Steinman, Engineer, 117 Liberty Street, New York 6, N. Y., will lend and forward copies of Plans, Specifications, General Provisions and form of Proposal, Bond and Contract for the work. All contractors using this service agree to return all of said copies to D. B. Steinman at the above address not later than ten days after the time the proposals are scheduled to be opened and read. No part of the $10.00 will be refunded.

All proposals must be made upon blank forms attached to the Specifications, and shall be accompanied by a certified check or bidder's bond, made payable to The Interstate Bridge Company, in the amount of Ten Thousand Dollars ($10,000), and no bid shall be considered unless such check or bond is presented therewith. Such certified check, or bond, shall be delivered upon the condition that, if said bid be accepted, the party bidding will promptly and properly enter into and execute a contract and bond in accordance with the award. Should the successful bidder to whom the contract is awarded fail to execute the same within ten days from the date of notification of such award, such check or bond shall be forfeited to The Interstate Bridge Company as liquidated damages, and the same shall become the property of The Interstate Bridge Co. All other certified checks or bonds will be returned to the unsuccessful bidders who submitted the same.

A good and sufficient surety company bond acceptable to The Interstate Bridge Company will be required for the faithful performance of the construction contract in a sum equal to the full amount of the contract price.

The contract for work to be done shall be in writing, executed by the Contractor and The Interstate Bridge Company in triplicate.

The contract will be let to the lowest bidder, which, in the opinion of The Interstate Bridge Company, is responsible and qualified, but the right is reserved to reject any or all proposals.

THE INTERSTATE BRIDGE COMPANY
By Charles McCamic
President

D. B. STEINMAN
ENGINEER
Dated June 30, 1949.

U. S. Government

UNITED STATES DEPARTMENT OF THE INTERIOR, BUREAU OF RECLAMATION. Notice is hereby given that sealed bids will be received at Casper, Wyoming, until 10 a.m., Mountain Standard Time, July 12, 1949, and then publicly opened for furnishing and delivering the equipment for the control board and battery charger and furnishing the services of an erecting engineer for New Casper Substation, Kendrick Project, Wyoming.

Copies of the standard forms and of the specifications may be obtained from the following offices of the Bureau of Reclamation: A. A. Batson, Regional Director, New Customhouse, Denver, Colorado, and I. J. Matthews, District Manager, Casper, Wyoming. No charge to prospective bidders for copies of the specifications and drawings; to others $0.50 per copy, not returnable.

(219)

EMPLOYMENT

REPLIES (Box No.): Address to office nearest you
NEW YORK: 330 W. 42nd St. (18)
CHICAGO: 520 N. Michigan Ave. (11)
SAN FRANCISCO: 68 Post St. (4)

POSITIONS VACANT

WANTED—ENGINEERS, Architects, Draftsmen experienced in the design of sewers, sewage treatment plants, water treatment plants and industrial buildings. Also engineers to supervise construction. State qualifications, experience. Salary requirements and date available. P-1155, Engineering News-Record.

SALES ENGINEER: 25-40, to make inspections, estimates, close and follow jobs in field. Highly specialized work—thorough training furnished by us. Traveling essential. Headquarters New York area. P-9175, Engineering News-Record.

WANTED: ESTIMATOR for Heating, Plumbing, Air-Conditioning Contractor located in Central Pennsylvania. State age, qualifications, experience and salary expected in first letter. P-9176, Engineering News-Record.

ENGINEER, CIVIL, experienced in drafting, quantity estimating, field layout work and supervision for general contractor. Write P. O. Box 755, Langley Field, Va.

FOR CENTRAL & Northern New York State: Bricklayer Foreman capable of handling brick and stone work on large project, ready to start in four to six weeks. Answer in own handwriting stating age, background, character and experience references, and following, if any. P-9188, Engineering News-Record.

FIRST CLASS structural-detailer-checker Location East. Top rate. State age, availability, experience in first letter. P-9223, Engineering News-Record.

POSITIONS VACANT

ESTIMATOR-FOR General Contractor or industrial, institutional, and commercial work. Graduate Engineer. Prefer man having purchasing, follow-up, and field experience. Excellent opportunity. Immediate opening. Location Northern Michigan. Apply to P-9298, Engineering News-Record giving full particulars as to experience, education, age, and names of previou employers. (our employees know of this ad).

WANTED, ENGINEER: Estimator with experience in road construction of all types pavement and underground work in New York Metropolitan area. State age, experience and salary. P-9266, Engineering News-Record.

DESIGN AND Construction Engineers experience on concrete grain elevators, mills, and terminals. P-9305, Engineering News-Record.

(Continued on page 59)

TEST ENGINEERS

For Work on Guam

Graduate Engineer exper. in Lab and Field testing of Soils, Concrete and Construction materials.

PACIFIC ISLANDS ENGINEERS
Frederic R. Harris, Inc.
Blanchard & Maher
Keller & Gannon

2nd Floor—Ferry Building
San Francisco 11, Calif.

DISTRIBUTOR

WANTED

Established manufacturer of nationally advertised waterproofing and other compounds for concrete seeks individual or organization to distribute its products in promising territories such as some midwestern States, Utah, Georgia, Virginia, Alaska, Canada. Knowledge of construction and ability to sell most essential. Personal contacts with Architects, Engineers and Industrials a requisite. Please give complete details as to experience and contacts. Replies confidential. Write:

RW-9211, Engineering News-Record
330 W. 42nd St., New York 18, N. Y.

GRADUATE CIVIL ENGINEER

with broad experience, a substantial portion of which has been in hydraulics. An excellent opportunity with a large public utility located in eastern Pennsylvania. Apply by letter stating education, experience and salary requirements. Address

P-8786, Engineering News-Record
330 West 42nd Street, New York 18, N. Y.

POSITIONS VACANT

(Continued from page 58)

ENGINEER, CIVIL, experienced in surveying, drafting, quantity estimating and field supervision. First class man only. Write P. O. Box 755, Langley Field, Va.

CIVIL ENGINEER. Young, Registered, experienced—for position as City Engineer. Central Missouri. Salary $300-$400 per month. P-9271, Engineering News-Record.

WANTED: THOROUGHLY experienced estimator for building contractor specializing in public works. Stanley W. Newman Co., Inc., Mobile, Ala.

POSITIONS WANTED

CONSTRUCTION SUPERINTENDENT — 27 years experience in complete charge of projects consisting of: chemical plants; slip-form concrete structures; material handling and process equipment installations; grain elevators and dryers; cement plants. Under fifty years of age. Will go any location. Further details on interview. PW-8914, Engineering News-Record.

STRUCTURAL ENGINEER, registered wants to take work in contract. Thoroughly experienced in design of bridges and other heavy construction. Large or small contracts efficiently handled. PW-9082, Engineering News-Record.

BUILDING CONSTRUCTION: Thirty years experience covering office management, general supervision, estimating; apartments, hospitals, office buildings, hotels, laboratories, industrial plants. PW-9128, Engineering News-Record.

CONSTRUCTION EXECUTIVE: Thirty years of experience, twelve of which was self-employed in New York. References relating to capability, integrity and resourcefulness obtainable. Wishes a position with construction firm in or around the city of New York, preferably in the city. PW-9166, Engineering News-Record.

CONTRACTOR'S RIGHT Hand Man; age 36. Experienced Manager-Estimator-Purchasing Agent—On: Commercial, Multi Residential, Industrial Bldg. Construction—including All Utilities:—and Engineered Construction covering Airports, Marine Facilities, Railroads, Roads and Quarry Operation. Desires permanent position as Manager, Estimator, or Purchasing Agent for Gen. Contractor; or as Area Sales Manager for Cement Co., Bldg. Supply Co., or w/Equipment Mfg. or Dealer. Good References. PW-8941, Engineering News-Record, 520 N. Michigan Ave., Chicago 11, Ill. In reply state exact salary connected with position open.

CONSTRUCTION SUPERINTENDENA, Piping process equipment, age 38, 20 years experience heavy construction, foreign or domestic. Available June 15. PW-9219. Engineering News-Record.

CIVIL ENGINEER, Cornell graduate, married, age 28, postgraduate work in indeterminate structures. Experience: RR track planning and layout; oil refinery construction, equipment layout and pipe sketching. Desires position with contractor for field and office work. Available 2 weeks' notice. Locate anywhere. PW-9213. Engineering News-Record.

SUPERINTENDENT WATER works or Sewage Plant. Extensive experience in operation and maintenance of plants, distribution systems and collection systems. Especially successful in chemical treatments, filtration improvements, improvement of distribution systems, chemical, physical and bacteriological examinations of all types of waters. Education, B.S. in Chemical Engineering with 12 years of active experience with plants of all sizes. Interested only in positions where water works or sewage properties are to be operated and maintained properly. PW-9205. Engineering News-Record.

CONTRACTORS SUPT., executive, desires change. Preferably bridges, reservoirs, filter plants, foundations, etc. Some building experience. 57 years good health, fair education, clean habits. Eastern states. $150 wk. plus %. PW-9070. Engineering News-Record.

QUARRY MANAGER. Eng. graduate, 16 years experience in all phases of crushed stone industries. PW-9255, Engineering News-Record.

VERSATILE ENGINEER: graduate, 20 years experience varied mechanical, structural, educational, and administration fields: in design, stress analysis, estimating, finance, personnel, customer relations. Able speaker — mixer, healthy, alert, tactful, energetic. Know industrial buildings, structures, machinery, processes; construction, conveying, erection equipment. Employed but desires responsibility with good monetary return. PW-9270, Engineering News-Record.

DRAFTSMAN STRUCTURAL (Buildings & Bridges), German graduate, longtime overseas, 1 year U.S.A. experience, moderate salary. PW-9310, Engineering News-Record.

EMPLOYMENT

AND OTHER BUSINESS OPPORTUNITIES

UNDISPLAYED RATE

(Not available for equipment advertising)

$1.20 a Line, minimum 4 lines. To figure advance payment count 5 average words as a line.

INDIVIDUAL EMPLOYMENT WANTED undisplayed advertising rate is one-half of above rate, payable in advance.

Box Numbers in care of our New York, Chicago and San Francisco Offices count as one additional line.

Replies are forwarded each day as received at each of the offices mentioned without additional charge.

Discount of 10% is allowed if full payment is made in advance for 4 consecutive insertions.

DISPLAYED RATE

The advertising rate is $11.50 per inch for all advertising appearing on other than a contract basis. Contract rate quoted on request.

An advertising inch is measured ⅞ inch vertically on one col., 3 col.—30 inches to a page. E.N.R.

POSITIONS WANTED

ENGINEER WITH long background of experience in design, construction and operation of power plants for utility companies, sugar mills, paper mills, textile mills, chemical plants, steel mills and varied industrials. Four years engineering and management experience in Latin America. Familiar with labor laws and management problems in these countries. Speaks fair Spanish. Now employed. Available on reasonable notice. Go anywhere, preferably Latin America. Personal interview desirable. PW-9268, Engineering News-Record.

CIVIL ENGINEER-Executive. 30 years broad experience from drafting to design to supervision of office and field work on construction projects. Extensive review of design of water Purification and Sewage Treatment Plants. Chief and Consulting Engineer of Large Military Organizations and Posts. Long term position wanted. PW-9291, Engineering News-Record.

STRUCTURAL ENGINEER. Age 39, Graduate, Registered, presently in charge of structural department for firm doing important commercial and industrial work. Previous experience includes responsible charge of design of continuous and rigid frame bridges and important water front structures. Desires to relocate in position of responsibility. PW-9282, Engineering News-Record.

REGISTERED ENGINEER, Graduate C.E. desires position in East to Midwest with contractor or engineering firm. Experienced in steel erection, design, layout and field supervision of engineering structures such as complicated foundations, shop buildings, concrete structures of one, two, and three stories. Presently employed where construction program is being completed. Correspondence invited. PW-9279, Engineering News-Record.

ESTIMATOR-EXECUTIVE. Many years experience all types and sized buildings and civil engineering works, especially quantities, estimates, supervision accounts, etc. Please state approximate salary to avoid delay. Also allowances, etc., paid. Any location considered. PW-9277. Engineering News-Record.

CIVIL ENGINEER—Jun. A.S.C.E., 30, married, B. S. in C.E. plus graduate work in Geodetic Surveying, 8 yrs. varied field and office experience in heavy construction field, recently Chief Field Engineer on large project in W. Africa. Desires heavy construction field position. PW-9318, Engineering News-Record.

PROJECT MANAGER or General Superintendent. Available July 1st. Over 25 years diversified experience foreign and domestic work. Outstanding record on reorganization of delayed projects and in over-all management supervising all departments. Highest references. PW-9253. Engineering News-Record.

GENERAL OR Job Superintendent. 20 years experience in supervision, estimating, purchasing, and expediting, on all types of Federal, Industrial, Commercial and Institutional Construction. Available July 8th. PW-9313. Engineering News-Record.

FIELD OR Sales Engineer. Young, single, civil graduate, veteran, desires position with chance for rapid advancement—location immaterial. PW-9312, Engineering News-Record.

SALES MANAGER
AVAILABLE

Construction, mining, and industrial equipment. Twenty-one years complete experience engineering, contracting, distributing, and manufacturing. Civil engineer, age 42, excellent health. Domestic or foreign. Location and contract open.

PW-9105, Engineering News-Record
520 N. Michigan Ave., Chicago 11, Ill.

BUSINESS IN WESTERN EUROPE?

Consulting Engineer
with offices in Spain and Switzerland
is prepared to cooperate.
For full particulars address
PW-9276, Engineering News-Record
330 W. 42nd Street, New York 18, N. Y.

POSITIONS WANTED

ENGINEER (GRADUATE electrical-mechanical) 30 years in all branches, field and office. Consultant, supervisor, liaison on large construction projects handling utilities and building construction of communities efficiently. Also survey and reports on Foreign Nations power and industrial exploitation. Anywhere home or abroad. Physically perfect. Age 54 years, Min. 900 and up in accordance with location. Highest references possible. Present contract expires September. J. Slingerland, Pleasantville, New York. Phone 2393.

FIELD ENGINEER—Civil Graduate—31 yrs. age. Broad experience on large scale topographic surveys and heavy construction in Mexico, South America, Middle East, and U. S. Desires connection with contractor. West or West Coast preferred. PW-9321, Engineering News-Record.

SELLING OPPORTUNITY WANTED

ARE YOU looking for a sales representative? Correspondence invited from reliable manufacturer of Building Specialty. Have excellent references. Eleven years sales-engineer. Five years engineering. Will consider straight commission basis for exclusive territory. New York first choice. Out of town considered. RA-9319, Engineering News-Record.

NEW DISTRIBUTOR WISHES PRODUCT

Licensed Engineer with small overhead located downtown New York. Several years experience Civil Engineering and Sales Engineering. Have contacts with leading Engineering Firms. Associate has contacts with Architects and Builders. Best references furnished. Can handle item requiring sales and engineering service.

RA-9320, Engineering News-Record
330 W 42 Street, New York 18, N. Y.

BUSINESS OPPORTUNITY

We will financially qualify Midwestern asphalt company which is equipped and wishes to expand business by co-partnership arrangement, in future contracts. We are capable of prompt decisions with good banking references.
Correspondence confidential.

BO-9153, Engineering News-Record
520 N. Michigan Ave., Chicago 11, Ill.

SURVEYING INSTRUMENTS

USED • REBUILT • SALE
RENT • REPAIRING

It costs no more
to have your instruments of any make
repaired by the makers of the
WORLD'S FINEST SURVEYING INSTRUMENTS
since 1871
C. L. BERGER & SONS, INC.
37 Williams Street, Boston 19, Mass.

NEW STEEL (A7-46), BARGAIN (SAE 1020)

100 Tons 12x12x65# 40'0" & 50'0"
100 Tons 10x10x49# 40'0"
100 Tons 8x 8x31# 40'0"

Priced @ $65.00 N.T. FOB N. Y.

LONG ISLAND STRUCTURAL STEEL CO., INC.
400 Tiffany St. Bronx 59, N. Y.
DAyton-9-8700

FOR SALE

1—Chain Hoist, 2 Ton, Model C
5—Electric Chain Hoists, 1 Ton, Budgit K-16
7—Budgit I-Beam Trolleys
1—1500 W Electric Generating Plant

For complete list of surplus equipment write

BYRNE-PEORIA COMMUNITIES, INC.
P. O. Box 1259 Peoria, Illinois

U. S. ARMY SURPLUS

TARPAULINS

- Guaranteed Reconditioned
- Heavy Duty No. 6 Duck
- Heavy Construction
- Large Sizes
- Waterproof
- Flame Resistant

SEGALL MACHINERY CO.
700 W. West St., Balto. 30, Md. Sa 6526
3673

The following used wood barges are offered for sale, berthed in Baltimore, Maryland, Harbor:

One (1)— 84 ft x 36 ft.
One (1)—111 ft. x 33 ft.
One (1)— 92 ft. x 33 ft.

Baltimore Telephone:
Broadway 2800, Extension 2
F. N. Sands

FOR RENT

New and almost new Manitowoc Speedcranes

60 ton—2½ cu. yd. capacity Combination cranes, dragline and clamshells, caterpillar mounted—diesel powered. Reply

FR-8967, Engineering News-Record
330 West 42nd Street, New York 18, N. Y.

RAILS-TIES

TRACK ACCESSORIES

RAILS-ANGLE BARS TIE PLATES

Write for Regular Bulletins of

CURRENT LISTINGS

Complete Range of Sizes
Always Available

RAIL DIVISION

COMMERCIAL METALS
Company
LATIMER AT CORINTH, P.O. BOX 1046, DALLAS

FOR RENT OR SALE

Stiff-Leg and Guy Derricks All Capacities

KOCH
362 Casanova St. Bronx 59, New York

MACK TRACTORS

Five EQU's, 10:00 x 20 tires, underdrive, vacuum and air brakes, Garwood 20,000 lb capacity drum type winch and pole derrick attachment. Two Mack EHU stake body trucks. Two Browning 15 ton ¾ yard truck cranes, tandon drive, 11:00 x 20 tires. Inspection New York Area.

FS-9324, Engineering News-Record
330 West 42nd Street, New York 18, N. Y.

PILING

For Sale or Rent

STEEL SHEET PILING

103 pcs. 20 ft. Inland 127—Okla.
114 pcs. 70 ft. Carn. M116—N. J.
Other lengths and sections at various locations.

MISSISSIPPI VALLEY EQUIPMENT CO.
509 Locust St. Chestnut 4474 St. Louis, Mo.

FOR SALE

New Steel Sheet Piling in 45 ft. lengths

195 PCS AP3
112 PCS MP115
75 PCS MP116
9 PCS CP40 Corners
9 PCS CP41 Corners
6 PCS C12C Corners

JOHNSON-GREENE COMPANY
Ann Arbor, Michigan Telephone 2-2537

PIPE

CORRUGATED METAL PIPE

6000 ft. 24"
2000 ft. 12"—Some new, some used (used for ventilating system at Nottingham Water Intake.

DRILLS—MUCKING MACHINES DINKIES

(operated by batteries and electric starters-comp.)

8000 ft. 24" gage—30 lb. rails
40 HP & 45 HP Electric blowers

Call or write

THE KALILL COMPANY
4161 W. 150th St. Cleveland, 11, Ohio
Phone: Days Clearwater 3848
Nights Clearwater 7922

6" STD. LINE PIPE

42,500' 6⅝" O.D., 18.97# Lapweld, 40 ft. random lengths, plain ends beveled, used, good condition. Priced low immediate delivery from East St. Louis, Ill.

HORWITZ PIPE & STEEL CO.
Ph. 2-9128 Tulsa, Okla

NEW 40 LB. DOUBLE DUTY RAIL LESS THAN MILL PRICE

W. H. DYER CO. INC.
1859 Railway Exchange Bldg. ST. LOUIS, MO.
Also new 20—25—30—35 lb. & 130 Tons 100 RB No. 1 Relayers.

FOR SALE

BROWNING TRUCK CRANES

Two—New 1947, T-15's Sectional Booms up to 100 feet. Tandon drive. Original cost $21,000.00. Used about 8 months on steel erection. Will consider lease.

FS-9325, Engineering News-Record
330 West 42nd Street, New York 18, N. Y.

FOR SALE

BAY CITY CRANE 1948
¾ yd. Diesel Powered 90% new
$12,500.00
D-7 CATERPILLAR 1948
Cable Angle Dozer Used 700 hrs.
$12,500.00

C. F. SCHUMAKER
Phone 3-2457 Maumee, Ohio

FOR SALE

Byers Bear Cat Jr. ⅜ Yd. Back Hoe Attachment. Price $700.00

ROSASCO REALTY CO.
Danbury, Conn. Phone: 3806-W

WANTED

WANTED

TRACK CHAINS

for TD18 tractor, new or used without grousers.

BENDIX MACHINERY CO., INC.
401 Broadway, New York 13 Tel: Canal 6-5693

WANTED

STEEL SHEET PILING

Bethlehem Section SP-4 or equal.
Will pay up to $70.00 ton for material in usable condition.
What have you?

W-9246, Engineering News-Record
330 W. 42nd St., New York 18, N. Y.

WANTED

P&H MODEL 255A TRUCK CRANES

MOUNTED ON P&H FACTORY CARRIERS

W-9244, Engineering News-Record
330 W. 42nd St., New York 18, N. Y.

WANTED

2 General Motors Diesel Engines Either Model 8-278A or 8-567B with or without cooling and starting systems. Must be good condition.

W-9311, Engineering News-Record
330 W. 42nd Street, New York 18, N. Y.

WANTED

50 or 60 ton low-boy, trailer truck for 60 ton low-boy, shovel front and backhoe for P&H 855LC crane.

Write

P. O. Box 755, Langley Field, Va.

WANTED

One good late model 34-E dual drum Koehring paver. Serial number above 21000.

W-9323, Engineering News-Record
330 West 42nd Street, New York 18, N. Y.

USED AND REBUILT EQUIPMENT
FOR SALE

Austin-Western Grader Model 77 Senior, Tandem Drive complete with self-starter, scarifier. Price—$1,000.00.

Case Model RI Tractor, pneumatic tired, complete with power hydraulic lift, enclosed cab, heater, windshield wipers and 5 ft. Highway Mower. Tractor thoroughly rebuilt and guaranteed. Price—$1,500.00.

Austin-Western Patrol Sweeper, with 2 extra rear brooms 1 extra gutter broom. Price —$1,500.00.

Austin-Western Patrol Sweeper, late model, completely rebuilt and guaranteed, with new broom filling machine 2 extra rear broom, 1 extra gutter broom. Price —$3,000.00.

Koehring Cement Mixer, Model 14S w/skip and Loader, on 2 pneumatic tires. Price —$250.00.

International TD 14 Crawler Tractor w/Bucyrus Erie Angle Dozer, complete rebuilts, looks and runs like new—new rollers, new sprockets, new take-ups, bearings, battery, equipped with lights—1944 Model. Price—$5,500.00.

Several slightly used Flink self-feeding Tailgate Spreaders power hydraulic drive, operating from cab by driver of truck. Installed on customer's truck. Price—each $875.00.

Several rebuilt 2" Centrifugal Pumps. Price—each $100.00.

International McCormick-Deering 1020 Tractor and Cab, very good condition. Price—As Is $350.00.

Painted any color customer desires — Painted—$450.00.
Can also install snow plow on same. Snow plow installed on same—$275.00.

Model HS, 1941, FWD Four Wheel Drive Truck, completely overhauled, has 2½ yd. Dump Body, new tires. Price $2,500.00. Can install snow plow on same, complete with power hydraulic lift. Price—$600.00.

FWD Four Wheel Drive Truck, Model HS, with combination hoist and platform body, complete with power hydraulic lift, snow plow frame and snow plow. Price — $850.00.

FWD Four Wheel Drive Truck, Model SSU, 5 ton, rebuilt, has brand new Waukesha Motor, 3 yd. Dump Body, on new rebuilt tires, has new heavy-duty front snow plow frame with power hydraulic lift, will paint new color customer desires. This is a very fine truck and will go out of our shop like new. Price—$2,500.00.
If snow plow is wanted for same, we can supply out of our stock, brand new. Price $500.00.
Or a good used plow. Price—$300.00.

FWD Four Wheel Drive Truck, Model HR, 1948, with 2½ yd. Dump Body, heater, defroster, windshield wipers, pintle hooks, two hitch, fully equipped, takes new guarantee. Price—$6,000.00.

Snow plow, snow plow frame are available for this truck in our stock and can be purchased at a very good discount.

GMC Combination Platform and Dump Truck, 2 ton capacity a very fine truck for what we are asking, only—$450.00.

Ford Marmon-Harrington, Four Wheel Drive, Dump Truck, complete with snow plow and power hydraulic lift. This truck is in very fine shape; also, has very good rubber. Price—$1,250.00.

Heavy-Duty Mack 10 wheel Platform Truck and Winch, motor recently overhauled and will paint any color for customer. This truck is worth twice what we are asking for it—only—Price $1,850.00.

Allis-Chalmers, Tandem Drive Grader, motor recently overhauled and a good buy for—Price—$1,000.00.

Good, Used, International T40 Tractor and Bulldozer motor, tracks, sprockets in very fine condition. Price—$1,650.00.

We will steam-clean and paint any color customer desires.

Chicago Pneumatic Compressor, practically brand new, 105 cu. ft. portable, mounted on 2 pneumatic tires, new guarantee. Included with this, we have one jack hammer and several pieces of drill steel and drill rods, ranging from 2 ft. up to 12 ft. Price—$2,300.00.

Chicago Pneumatic Compressor, portable, 60 cu. ft. used approximately 60 hours, with the following equipment; Jack hammer, several drills, bits, spades, hose, plunger, battery, cable reel, — complete kit for dynamiting purposes. A wonderful buy for practically brand new equipment. Price —$2,000.00.

We have several good Shovels ¼ to ½ yd. truck mounted, ½ to ¾ yd. crawler mounted, 1946-47-48. Write or call for information and prices.

Discount to Dealers on all the above equipment.

R. W. BLEILER EQUIPMENT CO., INC.

579 New Park Avenue *Telephone—3-4293* **West Hartford, Conn.**

FOR SALE

3—TRANSFORMERS

General Electric—New

500 KVA, Single Phase, 60 Cycle, Primary 13,200V, Secondary 2400V, Catalogue No. 47X347, Type HS-60-500-13200, 780 Gallon, No. 10C, complete with oil. Serial Nos. 8,636,995, -996, -998. These transformers were purchased new in 1948 and never installed.

Equipment located at Mount Morris Dam Site
Mount Morris, New York

For inspection and details contact
MOUNT MORRIS DAM BUILDERS,
MOUNT MORRIS, N. Y.
PHONE MOUNT MORRIS 298

FOR SALE BY OWNER

Bucyrus-Erie shovel, ¾-yard; Byers combination shovel, crane & backhoe, ½-yard; Caterpillar Model RD6 bulldozer; International Model T40 bulldozer; Austin-Western gas roller, 12 tons; International platform truck, Model DR60, with power winch, 17½ foot body.

S. F. PANDOLFO CO.
104 Asylum St., Hartford
Tel. 6-0811; Evenings, 6-9614

FOR SALE

Allis Chalmers HD-19 Tractor

Equipped with Carco cable bulldozer and front end control unit. Tractor and dozer have run less than 900 hours and are like new.

Phone 55 or wire,
L. DeMANSUE OWEN,
Cowgill, Missouri

"Opportunity" Advertising:
Think
"SEARCHLIGHT"
First

FOR SALE

Euclid Bottom Dump Hauling Unit, 23 Yd. Capacity, Mod. 71M, Serial No. 2360

Five DW-10 Hauling Wagons, Caterpillar, Serial Nos. V199-V156-1V65-1V77-1V88

Three Tournapulls, Model Super C. Serial Nos. C3T-4846-CIH-C3T-5309-CIH-C3T-4842-CIH

One Link Belt. ¾ Crane-Shovel-Backhoe, Serial No. IF937, Model 75

One Finishing Machine, Jaeger 25 Ft. Serial No. 42x056

One Concrete Spreader, Jaeger, 25 Ft. Serial No. 47x802

One Flynn Sub-Grader, Serial No. 5

One Materials Bin, Blaw-Knox, 105 Ton

One Cement Plant, Madsen, 350 Bbls. Serial No. PF 124.

For Detailed Information, Contact
OTTINGER BROTHERS
P.O. Box 5067, Oklahoma City, Oklahoma
Telephone 9-4473

CLEVELAND TRENCHER

REBUILT model 95 wheel trencher 14 buckets. Capacity 16" to 24" width 5½' depth. This is an excellent machine worth your inspection.

GENERAL EQUIPMENT CO.
133-18 227 St. Laurelton L. I. N. Y.
Lau. 8-8117

FOR SALE

Pull Shovel Attachments

(1) Northwest #4, 5 or 6........$1900
(2) Bucyrus-Erie 38-B, almost new incl. extra teeth & cutters.....$4500

TULLER CONSTR. CO.
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- 1—N. W. Shovel, ¾ c.y. Diesel, Backhoe—40' Crane, Dragline, new Aug. 1948
- 1—Allis Chalmers Tractor Model HD19H, new May 1948
- 5—D W 10's—used 2500 hours
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- 1—Caterpillar D8 Angledozer #8R8933
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FS-7325, Engineering News-Record
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Special Items

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25	"	30"—108#	"	60' 0"

Ship Channels
6"—12#—15.3#—18#—15.1#—16.3#
8"—18.7#—22.8#
9"—25.4#
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12"—32.9#—40#
13"—31.8#
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Lengths 40' to 60'

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- 1—Rex No. 105 Mixer.
- 1—Jaeger one bag mixer.
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All of this equipment is located in Western Pennsylvania.

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1—MODEL 22B BUCYRUS-ERIE SHOVEL

unused, price $14,000.00 f. o. b., Independence, Kansas.

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Both recently overhauled and in excellent condition.

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SHOVELS

Two Marion 93M Shovels, 26 ft. booms, 20 ft. handles, 2½ yd. dippers. Cat D17000 Diesel Engines, Serial No's. 8780 and 8782. New Summer of 1948, used about three months. Located New Milford, Pa.

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The following D8 Caterpillar Tractors 1H Series:—
One with Bulldozer and P.C.U. located Bristol, Pa.
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One with P.C.U. and Bulldozer, located Minneapolis, Minn.
Three with Bulldozer and P.C.U. located Johnstown, Penna.
One with P.C.U. located Harrisburg, Illinois.

COMPRESSORS

One Chicago-Pneumatic 105 c.f. Ser. #38605 Hercules Engine. Located Johnstown, Penna.
One Worthington 315 c.f. Ser. #72583 International Diesel Engine. Located Minneapolis, Minnesota.
One Worthington 160 c.f. Ser. #72422 Gasoline Engine. Located Harrisburg, Illinois.
One Sullivan 105 c.f. Ser. No. 43083 Gas Engine. Located Harrisburg, Illinois.
One Gardner-Denver 365 c.f. Ser. #95410 Diesel Engine. Located Nedrow, N. Y.
One I-R 500 c.y. Ser. #40T8653 Hesselman Oil Engine. Located Nedrow, N. Y.
One Gardner-Denver (105 c.f. gas engine) Compressor. Located Johnstown, Penna.
One Worthington (160 c.f. gas engine) Compressor. Located Johnstown, Pa.

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One #112 Caterpillar Patrol Ser. 2M33. Located Johnstown, Penna.
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Lorain 82 Diesel 2 cy Shovel, unused
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Insley "K" 7 to. Truckcrane, rebuilt
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International TD18 hydr. & cable bulldozers, 1948

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$15.75 Ea
Lots of 50
$17.50 Ea.
Lots of 6
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List Price About $72.00

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15 Ton Ratchet Lever Jack. Automatic Lowering Ratchet Jack. 15 Ton Capacity. Height closed 28". Rise 19". Wt. 94 Lbs. 60" Handle. Extra heavy base with foot forged to the rack bar, insuring maximum strength at this point. Jack handles easily because it is in perfect balance when lifted by convenient handles.

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This trailer is excellent for mounting air compressors, welders, and light plants. Also a utility trailer which can be attached to a pick-up or passenger car for all sorts of light tools, equipment and material hauling. Capacity 2 ton. Four pneumatic Firestone tires, size 9:00x9. Timken bearing wheels; heavy steel frame. Originally designed for the army as a bomb trailer.

SPECIFICATIONS—57" from front to rear axle. 29½" width between wheels, 9'7" overall length, 42" overall width. Weight 465 lbs. Complete with tires: Firestone 6:00 9-.4 Ply. Timken-bearing wheels. Capacity: Approximately 4000 lbs.

$79.50 Ea 3 or More $75.00 Ea

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21"	112#, 132#	40/60'
24"	100#	30/60'
27"	94#	55'
30"	116#	35'
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Insley Model K, ½ yard
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Both attachments practically new. Priced to sell.

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CONSTRUCTION BUSINESS

Wage increases offset materials price drops

Scattered minor declines in material prices this month are more than offset by small wage increases over a broad front. The result will be a rise in the construction cost curve and a leveling in the building cost index. The new cost index values will be announced next week.

Lower prices continue in lumber, down $1 per M in Boston and Denver, $3 to $5 in Chicago and $5 in Minneapolis, $3 in Detroit, $2 in Los Angeles.

Red lead paint prices are down, in general, $2 a cwt. following further breaks in zinc prices. Galvanized pipe discounts are up one point.

Other construction material prices are steady or show only minor and scattered changes.

Purchasing agents, at their 34th national convention in Chicago this week, predicted a price drop for steel in 90 days. The steel producers have countered that only scrap and coal prices are down, that steel prices cannot come down unless freight and labor costs can be cut and unless production stays up well above the break-even point. For the week ending June 20 steel production was down to 84.4 percent of capacity compared with the record 102.0 percent in March.

New wage rates

Wage increases in June—offsetting the material price drops—range from 5¢ to a high of 37½¢ per hour but the majority fall in the 7½¢ to 15¢ range.

In Baltimore structural iron workers got 25¢, hoisting engineers 20¢.

In Birmingham, carpenters got 5¢ on top of the 10¢ reported last month.

At Chicago, a 10¢ increase went through for carpenters, iron workers, hoisting engineers, and for common labor, 15¢ for plasterers.

In Cincinnati 7½¢ increase went to bricklayers, electrical workers and common labor, 5¢ to steam fitters, 10¢ to iron workers. Hoisting engineers are still negotiating.

Cleveland carpenters renewed their 5¢ per hour tool replacement allowance, and got a 15¢ wage increase. Hoisting engineers got 15¢, building laborers 12½¢.

Dallas plasterers and electrical workers each upped their rates 37½¢.

No changes are reported from Denver but negotiations are in progress.

Detroit bricklayers, carpenters and plasterers each got 12½¢, and steam fitters went up 20¢, common labor 10¢.

Electrical workers in Los Angeles got 10¢ raises.

In Philadelphia laborers are up 12½¢.

St. Louis iron workers got 7½¢ and laborers 10¢ in the top range.

Montreal steam fitters are up 4¢, but laborers show lower rates—down 4¢ on building and 8¢ on heavy construction due to an over-abundance of unskilled labor.

A few more scattered results of 4th round negotiations are still to come but the bulk of the new construction wage rates are now on record.

Pennsylvania Turnpike shows income increase

Vehicles using the Pennsylvania Turnpike increased in number, 12.5 percent in May over the previous year and 14.4 for the twelve months ending May 31, 1949. Revenue collected by the commission from all sources was up 22 percent for the year to $6,324,798.

FHA mortgage insurance sets new record in May

May applications, for FHA insurance of mortgages on new 1- to 4-family homes under Section 203, broke all records. The 31,018 dwellings units covered exceeded the previous records, in April, by 4 percent.

Applications totalled 45,733 units of which 14,136 were for rental projects.

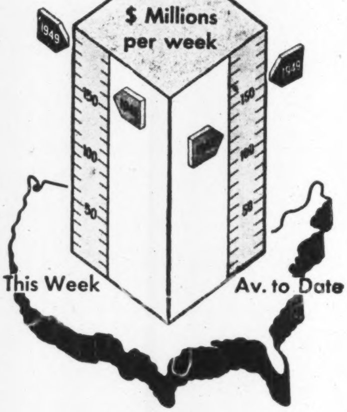
Dwelling units started in May topped April starts by 32 percent and at 32,344 were only 9 percent below the all time record set in April 1948.

Power house equipment is now on 6-mo. delivery

Power house equipment that a year ago was promised for 2-year delivery is now available in six months and a similar trend is developing in air-conditioning equipment, piping, elevators and other mechanical facilities for buildings. This report from Guy B. Panero, mechanical engineers, New York, also points out that firm delivery dates of materials and equipment are contributing to lower construction prices for completed buildings. These, says Mr Panero, are down 10 to 15 percent in the New York area and are 25 percent below their 1948 highs in the Midwest.

ENR INDEX NUMBERS

Index Base = 100		1913	1926
Construction Cost..	July '49	477.46	229.51
Building Cost	July '49	349.39	188.87
Volume	June '49	326	143



Activity This Week

As reported to ENR
(in millions of dollars)

Amount of Contracts let

	Week of June 30 1949	Cumulative 1949 (26 wks.)	1948 (27 wks.)	% chge av.wk.
Federal	$22.8	$555.1	$549.0	+5
State & Mun.	61 6	1,492.4	1,246.3	+24
Total Public.	$84.4	$2,047 5	$1,795.3	+18
Total Private	96.5	1,912.5	1,699.0	+17
U. S. Total..	**$180.9**	**$3,960.0**	**$3,494.3**	**+18**

Contracts by type of work

	This Week	Cumulative 1949 (26 wks.)	1918 (27 wks.)	% chge av.wk.
Waterworks.	$2.6	$87.1	$100.6	−10
Sewerage ..	5.6	129.7	109.6	+24
Bridges	7.9	172.9	153.5	+17
Highways ..	21.6	406.9	511.0	−17
Earthwork, Waterways.	10 1	308.6	278.5	+15
Buildings,				
Public	28 8	804.2	538.1	+55
Industrial .	39 4	504.3	541.1	−3
Commercial	49 8	1,200 3	1,011.2	+23
Unclassified .	15.1	345.9	253.2	+42

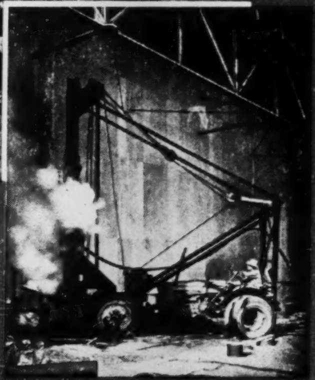
NOTE: Minimum size projects included are Waterworks and waterway projects, $28,000; other public works, $50,000; industrial buildings, $68,000; other buildings, $250,000.

New capital for construction

	Cumulative 1949 (26 wks.)	1948 (27 wks.)	% chge av.wk.
NON-FEDERAL ..	$2,672.2	$1,989.9	+39
Corporate Securities	1,277.0	1,026.8	+29
State and Municipal	1,395.2	963.1	+50
Total Capital	**$2,672.6**	**$1,989.9**	**+39**

NO JOB TOO LARGE

...NO JOB TOO SMALL



From a job of a few piles to one requiring many thousand piles, from a single caisson to a skyscraper foundation, from a simple soil investigation to a complete port development—no job is too large or too small for the Raymond organization. Specialized equipment, broad experience and highly trained personnel are your assurance of dependable work at minimum cost.
Your inquiry will receive prompt attention.

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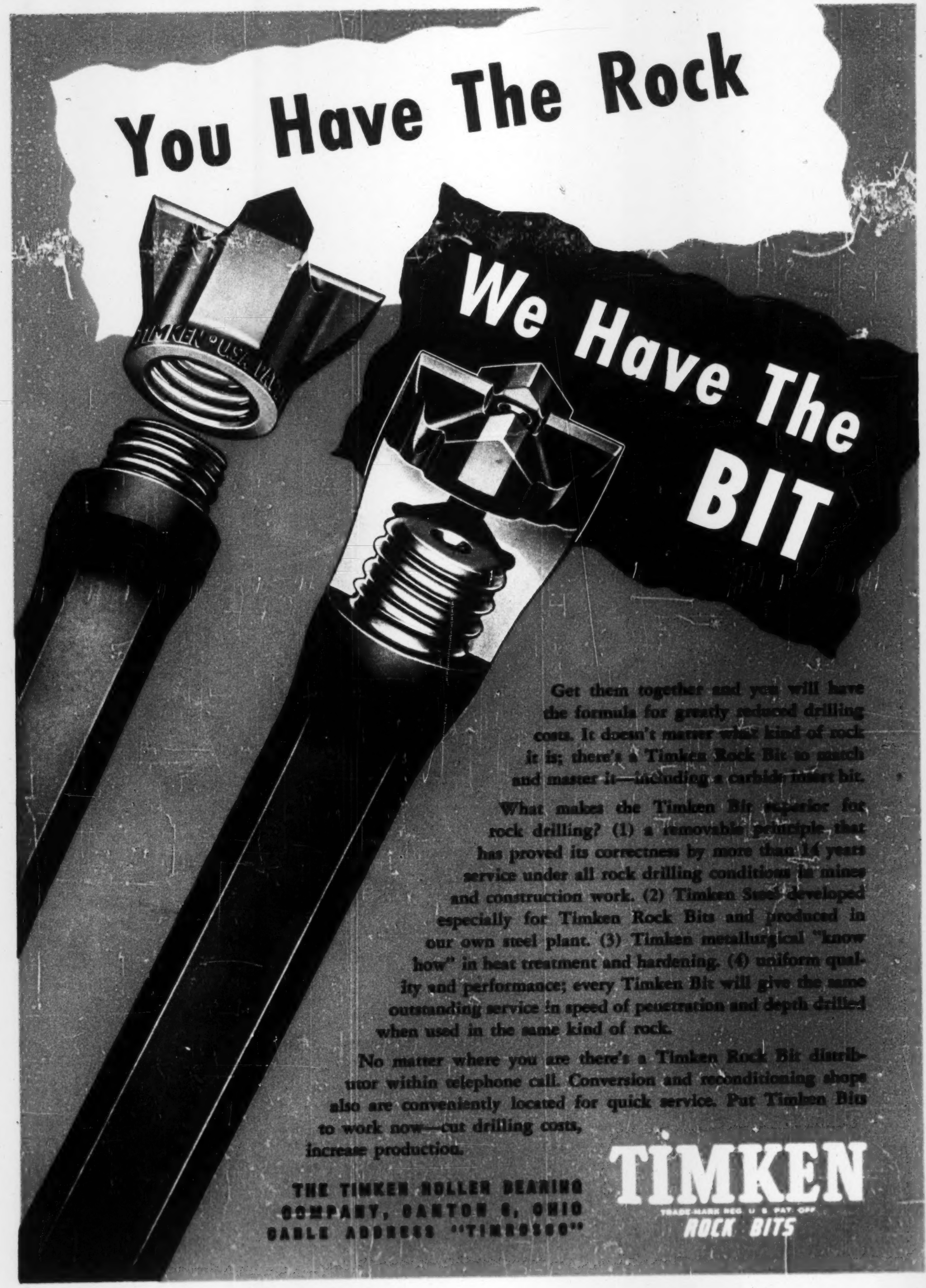
SCOPE OF RAYMOND'S ACTIVITIES includes every recognized type of foundation construction — concrete, composite, precast, steel, pipe and wood piles. Also caissons, underpinning, construction involving shore protection, shipbuilding facilities, harbor and river improvements and borings for soil investigation.



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No matter where you are there's a Timken Rock Bit distributor within telephone call. Conversion and reconditioning shops also are conveniently located for quick service. Put Timken Bits to work now—cut drilling costs, increase production.

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ROCK BITS